The Long-term Effects of Inflation on Inflation Expectations*

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Abstract

We study the long-term effects of inflation surges on inflation expectations using Germany as a laboratory. Households living in areas with higher local inflation during the hyperinflation of the 1920s expect higher inflation today, even after controlling for known determinants of historical inflation and inflation expectations and despite facing similar inflation rates today. Our evidence points towards a vertical transmission of inflation experiences from parents to children and a horizontal transmission through collective memory. Differential historical inflation also modulates the updating of expectations to current inflation, the response to economic policies affecting inflation, and financial decisions. We obtain similar results for Polish households residing in formerly German areas. Overall, our findings are consistent with inflationary shocks having a long-lasting impact on attitudes towards inflation, which raises the costs of disinflationary policies by central banks.

Keywords: inflation, inflation expectations, long-term persistence, German hyperinflation
JEL Classifications: D14, E31, E71, G41, N14

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1 Introduction

Following the COVID-19 pandemic and the war in Ukraine, inflation resurfaced, representing the first time many individuals have experienced inflation substantially above central banks' targets. Surges in inflation encountered during people's lifetime can trigger upward revisions of inflation expectations (e.g., Malmendier and Nagel, 2016; Goldfayn-Frank and Wohlfahrt, 2020; Salle et al., 2023). Yet, average inflation expectations of individuals across different age groups have been biased upwards relative to ex-post realizations (e.g., Weber et al., 2022; D'Acunto, Malmendier, et al., 2023). In this study, we propose that inflation shocks in the more distant past can also shape contemporary inflation expectations, offering a potential explanation for why inflation expectations tend to be higher than implied by lifetime inflation experiences. Such long-term effects of inflation complicate the job of central banks to manage inflation expectations and raise the costs of disinflationary policies (e.g., Uribe, 2025).

As motivating evidence, Figure 1 shows households' average inflation expectations in 2022 for 2023 (Panel A) as well as realized inflation in 2022 (Panel B) for European countries that did not experience a hyperinflation before 1930 (left bars) and for European countries that experienced a hyperinflation before 1930 (right bars). In Panel A, we find that individuals living in countries with a hyperinflation in the distant past have inflation expectations that are almost 1.4 percentage points higher than inflation expectations of individuals living in countries without such a history. In contrast, in Panel B, we find the difference in realized inflation rates between the two groups of countries to be only 0.3 percentage points and thus very similar. These raw data plots provide first suggestive evidence that inflation expectations are shaped by inflation shocks in the distant past rather than solely by current inflation.

To study the long-term effects of inflation shocks in detail, we focus on Germany. Germany provides a close-to-ideal setting for such an investigation for two main reasons. First, Germany experienced a severe hyperinflation in 1922-1923, and rich anecdotal evidence suggests

that this time period shapes Germans' attitude towards inflation to this day.[1] While everyone living in Germany today resides in areas that experienced the hyperinflation, very few individuals alive today lived through this formative period. This unique setting thus enables us to investigate the potential long-term effects of a major inflation shock. Second, we have granular data on realized inflation at the local level during the hyperinflation and on today's inflation expectations of households. In particular, we collect data on local inflation in 632 German towns between 1920 and 1924. Data on contemporary inflation expectations of households come from three large-scale surveys, the *Gesellschaft für Konsumforschung* (GfK) Consumer Climate MAXX survey, *Deutsche Bundesbank*'s Panel on Household Finances (PHF), and the Bundesbank Online Panel – Households (BOP-HH). By linking these data at the zip code or the county level, we can analyze whether local inflation during the German hyperinflation correlates with inflation expectations for the national level, measured by locality.

Figure 2 visualizes our main finding in the raw data. We sort towns in contemporary Germany into quintiles based on their cumulative inflation between 1920 and 1924. For each quintile, we average the inflation expectations of households living in those towns today. We then plot average contemporary inflation expectations against historical inflation quintiles. Consistent with the cross-country evidence, we find a positive relationship between contemporary inflation expectations and historical inflation at the subnational level. Because all towns experienced the hyperinflation, this relationship cannot be explained by the hyperinflation alone. Rather, the positive association suggests that individuals in areas with higher historical inflation expect higher inflation today. Moving from the lowest to the highest quintile of historical inflation increases expected inflation today by 0.6 percentage points, which corresponds to around 85% of the average realized annual inflation rate during the time period this survey covers. This result points towards an economically important long-lasting effect of inflationary shocks on inflation expectations.

[1] See, e.g., "Downward spiral: Already stumbling, Germany now faces threat of deflation", *The Wall Street Journal*, June 23, 2003; "Germany in the era of the hyperinflation", *Der Spiegel*, August 14, 2009; "German fears about inflation stall bold steps in debt crisis", *The New York Times*, December 2, 2011; "Will Europe find an answer?", *USA Today*, December 8, 2011; "Germany's hyperinflation-phobia", *The Economist*, November 15, 2013; "The eurozone: A strained bond", *Financial Times*, January 18, 2015; "Why Germany must swallow this Keynesian free lunch", *The Guardian*, February 24, 2015.

Inflation expectations of individuals can differ for reasons other than historical inflation rates. Therefore, in more formal analyses, we regress households' inflation expectations on historical local inflation, household controls, historical local controls, and county-time or state-time fixed effects. Household controls, such as age, gender, and education, account for known determinants of inflation expectations, such as lifetime experiences (e.g., Malmendier and Nagel, 2016; Goldfayn-Frank and Wohlfahrt, 2020; Salle et al., 2023), gender-specific shopping habits (e.g., D'Acunto et al., 2021), and cognitive abilities (e.g., D'Acunto, Hoang, et al., 2019; D'Acunto, Hoang, et al., 2023; Fermand et al., 2024). By including historical local controls, such as the historical local unemployment rate, we account for town-level characteristics potentially correlated with historical local inflation (e.g., Braggion et al., 2023). County-time or state-time fixed effects hold constant observable and unobservable regional time-varying determinants of inflation expectations. Hence, in these regressions, we essentially investigate whether differential historical inflation matters for today's inflation expectations of households that have the same observable characteristics and live in the same county or state, at the same point in time. Across all three surveys, we find a positive relationship between local inflation in the 1920s and today's inflation expectations, confirming the positive association in Figure 2 and pointing towards a long-term effect of inflationary shocks on inflation expectations.

We also test whether prior generations' inflation experiences are related to households' attitude towards inflation beyond inflation expectations. Using data from a fourth established survey, the Socio-Economic Panel (SOEP), we show that households residing in areas with higher historical inflation are more likely to prioritize fighting inflation as a political goal over maintaining peace and order, increasing citizens' influence on government decisions, and protecting the right to free speech. These results suggest that the inflation experiences of prior generations can shape attitudes towards inflation beyond inflation expectations.

Next, we investigate whether in addition to the magnitude of inflation in the 1920s also the timing and duration of the inflation exposure influence today's inflation expectations. We conjecture that the longer people were exposed to high inflation, the deeper the inflationary experience became ingrained. To test this hypothesis, we first examine which years of the German hyperinflation drive our findings. Local inflation at the onset of the inflationary

period in 1920, and at the beginning of the hyperinflation period in 1922 largely drive our results, rather than local inflation at the peak of the hyperinflation in 1923. This finding provides initial evidence that the hyperinflation experience became more deeply ingrained when households were hit early on, potentially because these households were exposed to high inflation over a longer period. To test this explanation more directly, we conduct a second test in which we construct measures that capture how long a given location experienced inflation above different thresholds. We find that localities with prolonged exposure to high inflation exhibit stronger long-term effects on inflation expectations, consistent with the idea that both the timing and the duration of an inflationary period shape inflation expectations over the long term.

We then perform several tests to rule out alternative explanations. One potential alternative explanation for the link between historical local inflation and today's inflation expectations is that historical local inflation might proxy for contemporary local inflation. In this case, households' inflation expectations might primarily reflect contemporary local inflation rather than historical local inflation. For this alternative explanation to hold, the spatial distribution of current realized inflation would need to align closely with the spatial distribution of historical inflation, implying that local prices have consistently diverged over time, which seems unlikely. Nevertheless, we first test whether historical local inflation correlates with realized local inflation today using the microdata underlying the contemporary German consumer price index. However, we do not find a significant association between inflation in the 1920s and current inflation. In an additional test, we augment our baseline regressions with today's realized local rate of inflation at the time of the survey as control variable. However, coefficient estimates on historical local inflation remain similar to those in our baseline regressions, suggesting that the relationship between historical local inflation and today's inflation expectations is not mediated by contemporary local inflation.

Another potential alternative explanation is that historical local inflation might proxy for other macroeconomic experiences not captured by the historical local control variables. In this case, omitted macroeconomic experiences are the driving force behind the documented relation, not historical inflation. To address this alternative hypothesis, we investigate the

relation between historical inflation and expectations of other macroeconomic variables. We find that past inflation is not significantly correlated with households' expectations about price changes for real estate, expected interest rates, and expected stock returns. These results suggest that the relationship between past inflation and today's inflation expectations is specific to inflation and unlikely to be driven by other macroeconomic experiences.

We then analyze the heterogeneity of the relation between historical inflation and today's inflation expectations. We do not find significant differences across respondents' gender and age. However, the relationship is weaker for respondents with a university degree, consistent with the idea that higher cognitive abilities reduce biases in inflation expectations (e.g., D'Acunto, Hoang, et al., 2019; D'Acunto, Hoang, et al., 2023). In contrast, those residing in rural areas exhibit a stronger association to local historical inflation, potentially due to the more robust preservation of collective memory in these communities (e.g., Schindler and Westcott, 2021). Thus, our cross-sectional analysis suggests that the persistence of the German hyperinflation experience varies significantly across certain respondent characteristics.

We can think of at least two, not mutually exclusive mechanisms through which the experience of the German hyperinflation persists locally across generations. The first channel is a vertical transmission of the experience from parents to their children. Transmission via such a channel would align with theories suggesting that cultural traits are passed on from one generation to the next (e.g., Bisin and Verdier, 2000, 2001) and is supported by empirical evidence (e.g., Dohmen et al., 2012; Schindler and Westcott, 2021). To test for this first channel, we analyze whether results differ for households with and without a migration background. We show that the link between past inflation and today's inflation expectations is weaker for households with a migration background, consistent with ancestors of these households being spared from the local experience of the German hyperinflation. This result supports a vertical transmission of the experience from parents to their children.[2]

The second channel that could drive our results is the horizontal transmission of inflation experiences through collective memory, referring to shared interpretations of the past often

[2] A weak association between historical inflation and current inflation expectations even for migrants could be consistent with an assimilation to local norms and attitudes or a horizontal transmission, such as a higher coverage of inflation in the media and political speeches, for which we provide empirical support below.

communicated through narratives (e.g., Halbwachs, 1992; Dessí, 2008; Assmann, 2011; Bühler and Madestam, 2023; Fouka and Voth, 2023). To investigate this mechanism, we perform two tests. Using a dataset encompassing all statements made in parliament since the foundation of the Federal Republic of Germany in 1949, we first investigate whether the experience of the German hyperinflation is transmitted through speeches of politicians, which are known to shape a society's collective memory (e.g., Cohen, 1999; Adams and Baden, 2022; Fouka and Voth, 2023). We find that politicians whose constituency experienced higher historical inflation are more likely to give speeches about inflation, suggesting that the collective memory of the hyperinflation is transmitted horizontally through politicians' speeches. Additionally, we show that politicians from constituencies with higher historical inflation talk more about inflation when contemporaneous inflation rates are higher, which is consistent with the notion that periods of higher inflation are important to refresh local memories of the hyperinflation.[3]

In a second test of the collective memory channel, we consider the horizontal transmission of the hyperinflation experience through the print media. The media shapes public narratives, beliefs about historical events, and inflation expectations (e.g., Lamla and Lein, 2014; Larsen et al., 2021; Goetzmann et al., 2023; Andre et al., 2024). Using a large sample of articles published in almost 100 regional German newspapers, we show that newspapers located in areas with higher historical inflation publish more articles on inflation today, which provides additional support for the collective memory channel.[4] Taken together, we find evidence for both the vertical transmission of inflation experiences from parents to children as well as the horizontal transmission through collective memory.

Next, we investigate the potential impact of prior generations' experience of the hyperinflation on how households update their expectations to current inflation. Such a relationship may be expected because of associative memory theory, a concept from the psychology literature, which suggests that cues trigger the recall of past experiences and helps to explain the formation of inflation expectations and economic choices more generally (e.g., Kahana, 2012;

[3]This result is also consistent with local politicians catering to the concerns of their constituents, but by doing so, they also refresh and shape the local collective memory.

[4]Even local newspapers might cater to the demands of their readership, similar to local politicians. Yet, similar to the previous argument, by doing so, they refresh and perpetuate the local collective memory.

Bordalo et al., 2020; Bordalo et al., 2023; D'Acunto and Weber, 2023; Charles, 2024; Enke et al., 2024; Gennaioli et al., 2024; Wachter and Kahana, 2024). In our case, current inflation might prompt households living in areas with higher historical inflation to recall stories and narratives about the hyperinflation and update inflation expectations more strongly. Consistently, we find that higher local inflation in the 1920s is associated with a more pronounced adjustment of inflation expectations to current realized inflation at the national level.

In a complementary test, we examine how the hyperinflation experience affects how households update their inflation expectations to current policy measures which the previous literature has shown to shape inflation expectations. The specific events we focus on are changes in the value-added tax (VAT), a measure of unconventional fiscal policy (e.g., D'Acunto et al., 2022; Bachmann et al., 2024). We exploit the temporary reduction of the German VAT, which lasted from July 1 to December 31, 2020. We find that households in areas with higher historical inflation react more strongly to the VAT increase, but not to the VAT reduction when updating their inflation expectations. This asymmetry aligns with associative memory theory, as rising inflation serves as a cue for recalling past inflationary experiences, whereas falling inflation does not trigger similar recall. This result suggests that inflation shocks dating back as far as 100 years can explain today's response of households to economic policies known to affect inflation, such as changes in VAT, but only when these policies are triggering higher inflation expectations.

In addition to better understanding how individuals form inflation expectations, we also care about the extent to which historical inflation affects the financial decisions of households via their effect on today's inflation expectations. According to the Fisher equation, higher inflation expectations lead to lower perceived real interest rates (Fisher, 1930). As a result, investments that promise fixed nominal payments become less attractive. Consistent with this hypothesis, we find that households living in areas with higher historical inflation invest a lower fraction of their financial wealth in bonds. Hence, local historical inflation can also help us understand households' financial decisions today.

So far, we have focused on German households. However, Germans are known to care a lot about inflation and might thus behave differently from households in other countries (e.g.,

Shiller, 1997), limiting the external validity of our results. Yet, the motivating evidence in Figure 1 already suggests that the results we find might not be specific to Germany. To test the generalizability of our findings more directly, we rerun our main analysis using data on Polish households. This test is possible because a significant share of contemporary Poland was part of Germany during the hyperinflation. The estimates we obtain for Polish households are similar in size to the ones for German households, albeit statistically weaker, likely due to reduced statistical power. Effects on Polish households are particularly pronounced in areas with less expulsion of Germans after the Second World War. These results again support the idea of long-lasting effects of inflation surges on inflation expectations..

Overall, our findings hint towards a transmission of inflationary shocks across generations, suggesting that the current surge in inflation could have lasting effects on inflation expectations. Such lasting effects underscore the importance of central bank policies aimed at achieving price stability in the short run, as they help mitigate the risk of entrenched inflation expectations. However, these persistent effects can also pose challenges to central banks' efforts to manage inflation expectations, potentially impairing the effectiveness of stabilization measures and raising the costs of disinflationary policies (e.g., Uribe, 2025).

Our paper contributes to at least two strands of the literature. First, we add to the literature on the formation of macroeconomic expectations, in particular inflation expectations. Previous studies find that households' inflation expectations are influenced by lifetime experiences (e.g., Malmendier and Nagel, 2016; Goldfayn-Frank and Wohlfart, 2020; Salle et al., 2023), cognitive abilities (e.g., D'Acunto, Hoang, et al., 2019; D'Acunto, Hoang, et al., 2023; Fermand et al., 2024), observed prices in daily life (e.g., D'Acunto et al., 2021), monetary policy communication (e.g., Coibion et al., 2022), as well as the media and public narratives (e.g., Lamla and Lein, 2014; Andre et al., 2024), among others.[5] We add to this literature by providing evidence that inflation experiences are transmitted across generations and can have a long-lasting impact on the formation of inflation expectations. Thereby, we offer an explanation for the well-documented upward bias in inflation expectations.

[5]Weber et al. (2022) and D'Acunto, Malmendier, et al. (2023) provide a recent review of the literature on the formation of inflation expectations.

Second, we contribute to the literature on long-run persistence. Previous research documents that events in the distant past can impact today's socio-economic outcomes such as racial attitudes (e.g., Voigtländer and Voth, 2012; Becker and Pascali, 2019; Schindler and Westcott, 2021; Ang, 2023; Fouka and Voth, 2023), trust (e.g., Nunn and Wantchekon, 2011; Becker et al., 2016; D'Acunto, Prokopczuk, et al., 2019), education and income (e.g., Becker et al., 2020; Drelichman et al., 2021; Nakamura et al., 2022), gender roles (e.g., Alesina et al., 2013), self-efficacy and individualism (e.g., Guiso et al., 2016; Cantoni et al., 2024) as well as political engagement and attitudes (e.g., Bursztyn et al., 2021; Bühler and Madestam, 2023).[6] In this paper, we establish that today's attitudes towards inflation can be explained by historical inflation episodes, pointing towards long-run persistence in a new domain.

2 Historical background

The origins of the German hyperinflation trace back to the onset of the First World War. In 1914, the German government suspended the convertibility between the *Mark* and gold and switched to a fiat money system. In the years thereafter, Germany had to finance current expenditures, the war, and, following defeat in 1918, reparation payments. Printing money became the primary method to meet these financial obligations. As a result, inflation increased substantially in the early 1920s and spun out of control in 1922 and 1923. In October 1923, the *Mark* stood at six billion-to-one relative to its pre-war value. In mid-October 1923, the government introduced a stabilization policy that stopped the hyperinflation.[7]

Figure A1 in Appendix C displays national consumer price indices (CPI) for Germany, other European countries, and the U.S. between 1870 and 2020 using data from Jordà et al. (2017). Before the hyperinflation period, Germany experienced moderate inflation rates similar to those in the rest of Europe and the U.S. However, in 1920, inflation rates started to diverge, a trend that accelerated until 1923. After the hyperinflation, Germany's inflation rates generally remained below those in other developed economies and rarely exceeded 10%.

[6] Cantoni and Yuchtman (2021) provide a review of this literature.

[7] Bresciani-Turroni (1937), Feldman (1937), Holtfrerich (1986), and Dalio (2018) describe the historical background in greater detail.

For example, during the oil price inflation shock of the 1970s, countries like Portugal and Spain saw annual inflation rates well above 20%, while, in Germany, inflation remained below 8%. Thus, the German hyperinflation can be considered a major inflation shock. In fact, the German hyperinflation is regarded as one of the most extreme hyperinflations documented to date (e.g., Hanke and Krus, 2013).

3 Data

3.1 Today's inflation expectations

We gather data on today's inflation expectations from multiple surveys. First, we use the GfK Consumer Climate MAXX survey, which GfK conducts on behalf of the European Commission as part of the harmonized E.U. survey on consumer confidence. These data have been used in previous research on expectation formation (e.g., D'Acunto et al., 2022). The survey is conducted at a monthly frequency and involves repeated cross-sections of a representative sample of approximately 2,000 German households. Thus, households cannot be tracked over time. The survey provides information on households' expected inflation over the next 12 months. We follow existing research and set the top and bottom percentiles of all point forecasts to missing (e.g., Goldfayn-Frank and Wohlfart, 2020). From December 2013 to March 2017, GfK provided us with zip codes of respondents' place of residence, which we use to match households to the towns for which we have historical inflation data.

Second, we use data from *Deutsche Bundesbank*'s PHF, which is administered by the Institute for Applied Social Science (infas) and part of the European Central Bank's (ECB) Household Finance and Consumption Survey (e.g., Goldfayn-Frank and Wohlfart, 2020). The PHF was conducted in 2011, 2014, and 2017, with each wave consisting of approximately 4,000 households. In contrast to the GfK survey, households are drawn from a prefiltered set of a few hundred municipalities and wealthy households are overrepresented to increase statistical power in tests on households' wealth. To capture households' attitude towards inflation, we again use their expected rate of inflation over the next 12 months. Unfortunately, expected inflation rates are only available in the wave conducted in 2014, which restricts our sample to

this wave. Apart from inflation expectations, the PHF also provides households' expectations of other macroeconomic variables, such as expected price changes for real estate, expected interest rates, and expected stock returns, as well as detailed information about households' wealth, such as holdings in savings accounts, stocks, and bonds. For each household, we obtain the county of residence, which allows us to assign households to towns for which we have historical inflation data.[8]

Third, we draw on data from *Deutsche Bundesbank*'s BOP-HH, an online survey of German households conducted by the *Gesellschaft für Sozialforschung und statistische Analysen* (forsa). This survey spans the time period from April 2020 to March 2022, capturing the recent surge in inflation, and includes 2,000 to 7,500 households per wave, again sampled from a selected set of a few hundred municipalities but representative of the German adult online population. Each wave includes households that have been interviewed in previous waves as well as refresher households. We again use households' expected rate of inflation over the next 12 months. We match households to historical inflation rates using information on the county of residence.[9]

Finally, we employ data from the SOEP, which is administered by *Deutsches Institut für Wirtschaftsforschung* (DIW) (e.g., Fuchs-Schündeln and Schündeln, 2005; D'Acunto, Hoang, et al., 2019; Fuchs-Schündeln and Haliassos, 2021). It consists of annual interviews conducted since 1984 with a representative sample of German households. Each wave includes households that have been interviewed previously as well as new households. The SOEP does not provide information on expected inflation rates. However, in the waves conducted in 1996, 2006, and 2016, respondents were asked to rank the relative importance of four political goals, namely "fighting inflation", "maintaining peace and order in this country", "increasing citizens' influence on government decisions", and "protecting the right to free speech". We

[8]This paper uses data from PHF wave 2 (doi: 10.12757/Bbk.PHF.02.04.01). von Kalckreuth et al. (2012) provide additional information on the PHF. All analyses were performed onsite at *Deutsche Bundesbank*'s Research Data and Service Centre (project number 2021\0035). The analyses, results, and views in this paper are those of the authors and not those of *Deutsche Bundesbank*.

[9]This paper uses data from BOP-HH waves 4 to 27 (doi: 10.12757\Bbk.BOPHH.202202.01). Beckmann and Schmidt (2020) provide additional information on the BOP-HH. All analyses were performed onsite at *Deutsche Bundesbank*'s Research Data and Service Centre (project number 2021\0071). The analyses, results, and views in this paper are those of the authors and not those of *Deutsche Bundesbank*.

construct a dummy variable that equals one if fighting inflation has the highest political priority, and zero otherwise. SOEP also provides zip codes of respondents' place of residence, which we again use to map households to towns for which we have historical inflation data.[10]

3.2 Local inflation in the 1920s

Data on local consumer prices in Germany during the 1920s come from the Quarterly Issue of the German Statistical Office (*Vierteljahresheft zur Statistik des Deutschen Reichs*).[11] Starting in December 1919, the statistical office collected prices of a basket of goods considered representative for a family of five members in German towns with more than 10,000 inhabitants and constructed a local consumer price index. These data were originally compiled because the German Department of Labor (*Reichsarbeitsministerium*) needed information on local price changes as a basis for wage negotiations. In total, we have monthly consumer price data for 632 towns, out of which 529 are located in contemporary Germany. We then assign zip codes in today's Germany to the closest town for which we have historical inflation data by minimizing the distance between each zip code's centroid and the town's center. Finally, we compute cumulative local inflation for each zip code as the percentage change in the consumer price index assigned to this zip code between January 1920 and December 1924.

Figure A3 in Appendix C shows the locations of towns for which we have historical inflation data (white dots) as well as cumulative local inflation between 1920 and 1924 for all zip codes in contemporary Germany. We sort zip codes into deciles based on their cumulative historical local inflation, with darker shading indicating higher cumulative inflation. The cumulative inflation of zip codes in decile 10 was approximately 70% higher than the cumulative inflation of zip codes in decile 1. A visual inspection of the map suggests that the southern regions of today's Germany, specifically the federal states of Bavaria and Baden-Wuerttemberg, experienced higher cumulative inflation in the 1920s. However, considerable

[10]This paper uses data from SOEP waves 13, 23, and 33 (doi: 10.5684/soep-core.v37). Goebel et al. (2019) provide additional information on the SOEP. Analyses were performed onsite at the Research Data Center of the Socio-Economic Panel of the DIW (project number 5024). The analyses, results, and views in this paper are those of the authors and not those of DIW.

[11]Figure A2 in Appendix C provides a sample page showing the consumer price index data from the German Statistical Office.

variation in inflation also exists at the local level, which we exploit in our analysis.[12]

3.3 Descriptive statistics

Table 1 reports descriptive statistics. Panel A presents descriptive statistics for the GfK sample. We match households to towns with historical inflation data and retain only respondents located within 20 kilometers of the historical towns. Moreover, we remove observations with missing control variables. Our final dataset comprises 30,899 respondents. Almost half of the respondents are female. Respondents are on average 50.8 years old and the mean monthly net income of households is approximately EUR 2,500. In 2017, the German population comprised 50.6% women, the average German was 44.4 years old, and the average household had a monthly net income of EUR 3,399.[13] 13.2% of respondents hold a university degree and 30.6% live in rural areas. On average, respondents expect prices to rise by almost 4.0% over the next 12 months. The average monthly rate of inflation between 1920 and 1924 in the respondents' zip code was 886%. However, this aggregate number hides substantial time-series variation. In 1920, the average monthly local inflation rate was 7.4%. It declined to 4.8% in 1921, rose to 38.5% in 1922, and reached 4,387.7% in 1923. In 1924, the year after the successful stabilization of the currency, the monthly local inflation rate averaged only 0.7%.

Panel B presents descriptive statistics for the PHF sample. After applying similar filters as above, the final sample comprises 3,446 households. 40.5% of respondents are female. The average age of respondents is 55.7 years. The mean monthly gross income of households is EUR 6,193 and the mean net wealth of households amounts to EUR 447,585. Households

[12]Braggion et al. (2023) investigate the determinants of local inflation in Germany between 1920 and 1923 for a subsample of 256 towns. They find that local inflation is higher in larger towns, regions occupied by French or Belgian troops, towns with lower unemployment rates, and locations where a branch of the central bank is present. In Table A1 in Appendix C, we replicate this analysis for all 529 German towns and the time period from January 1920 to December 1924 and find similar results. In the following regressions, we will control for known determinants of local historical inflation.

[13]Differences in household income between the overall population, GfK, PHF, and BOP-HH are likely due to differences in sampling and income definitions. The GfK samples from the entire population, whereas the PHF explicitly oversamples wealthy households, which tend to have higher incomes. The BOP-HH instead focuses on individuals who use the internet. Moreover, in the GfK data and the BOP-HH data, income is net of taxes, whereas income is before taxes in the PHF. In the PHF and the BOP-HH data, income is also defined more broadly (e.g., it includes income from financial assets). In addition, in the GfK and BOP-HH surveys, income is captured using categorical variables whereas respondents provide actual income figures in the PHF surveys. The highest category in the BOP-HH data is "EUR 10,000 or more" whereas the highest category in the GfK data is only "EUR 4,000 or more".

allocate 28.8% of their financial assets to savings accounts, 7.0% to stocks, and 2.7% to bonds. The average respondent expects prices to rise by 2.8% over the next 12 months.

Panel C displays descriptive statistics for the BOP-HH sample. We apply similar filters as in the other surveys. In contrast to the GfK and the PHF datasets, the BOP-HH and the SOEP datasets have a panel structure. However, in our main analysis, we only include non-repeated observations. This leaves us with approximately 30,000 respondents. The average expected rate of inflation over the next 12 months is 4.3%.

Finally, Panel D contains descriptive statistics for the sample from SOEP. We end up with approximately 18,000 respondents after applying similar filters as above. About 14.0% consider fighting inflation as the most important among the four political goals.

4 Empirical approach

To test for a relationship between local inflation in the 1920s and today's inflation expectations, we run the following regression:

$$\begin{aligned} Expected\,inflation\,rate_i = \beta Cumulative\,historical\,local\,inflation\,rate_i \\ +Household\,controls_i + Historical\,local\,controls_i + \gamma_{j\times t} + \epsilon_i, \end{aligned} \tag{1}$$

where $Expected\,inflation\,rate_i$ is the expected rate of inflation over the next 12 months of respondent i. $Cumulative\,historical\,local\,inflation\,rate_i$ is the cumulative inflation rate experienced between January 1920 and December 1924 in the location where respondent i lives. Throughout the paper, we use two variables to measure cumulative historical local inflation, the natural logarithm of cumulative local inflation as well as deciles formed on cumulative local inflation. $Household\,controls_i$ is a vector of respondent characteristics and includes, whenever the survey permits, a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989, before the fall of the Berlin Wall.[14] We select and define control variables based on the existing literature and account for

[14] Appendix B provides an overview of the household control variables used for each survey.

known determinants of inflation expectations such as lifetime experiences (e.g., Malmendier and Nagel, 2016; Goldfayn-Frank and Wohlfahrt, 2020; Salle et al., 2023), gender-specific shopping habits (e.g., D'Acunto et al., 2021), and cognitive abilities (e.g., D'Acunto, Hoang, et al., 2019; D'Acunto, Hoang, et al., 2023; Fermand et al., 2024). $Historical local controls_i$ is a vector of historical town characteristics and includes the average local unemployment rate between January 1920 and December 1924, a dummy variable indicating whether an area was occupied by the French or Belgian army, and a dummy variable indicating whether the German Central Bank (*Reichsbank*) had a local branch. They control for characteristics correlated with local historical inflation (e.g., Braggion et al., 2023). $\gamma_{j\times t}$ are either county-time or state-time fixed effects and account for observable and unobservable regional time-varying determinants of inflation expectations. ϵ is the error term. We cluster standard errors at the county level.[15] The coefficient of interest is β. It captures the relationship between local inflation experienced in the early 1920s and inflation expectations of households today.

5 Empirical results

This section contains our empirical results. First, we investigate the relationship between local inflation in the 1920s and today's inflation expectations (Section 5.1). Second, we perform several tests to rule out alternative explanations (Section 5.2). Third, we run cross-sectional tests (Section 5.3). Fourth, we study two potential channels through which the effect might operate (Section 5.4). We also analyze whether prior generations' inflation experiences are related to how households update their expectations to current inflation as well as economic policies affecting inflation (Section 5.5). We then analyze whether historical inflation matters for today's financial decisions (Section 5.6). Finally, we rerun our main analysis using data on Polish households (Section 5.7).

[15] Conley and Kelly (2024) show how spatial trends and spatial autocorrelation in persistence studies can inflate significance levels if not properly accounted for. To mitigate these concerns, we incorporate location or interacted location and time fixed effects in our regressions, effectively controlling for spatial trends across regions. In robustness tests, we additionally cluster standard errors at the state level (e.g., Bester et al., 2011) and use the spatial correction of standard errors proposed by Conley (1999).

5.1 Local inflation in the 1920s and today's inflation expectations

To investigate the relationship between local inflation during the 1920s and today's inflation expectations of households, we estimate Equation (1) and present results in Table 2. Panel A reports results based on GfK data. In Columns 1 and 3, we use the logarithm of cumulative historical local inflation at the zip code level as the main independent variable, whereas Columns 2 and 4 use deciles of cumulative historical local inflation. In Columns 1 and 2, we include interacted state-time fixed effects, whereas Columns 3 and 4 contain interacted county-time fixed effects. We obtain positive coefficient estimates in all four columns. The estimates are also statistically significant at least at the 5% level, except for Column 3. The reduction in statistical significance in Columns 3 and 4 is due to the inclusion of interacted county and time fixed effects, which absorb a substantial portion of the cross-sectional variation in historical local inflation. In these two specifications, identification solely comes from respondents surveyed at the same time and residing in the same county today but in towns with differing historical inflation rates. In Column 1 (Column 3), we find that a 1% increase in historical inflation is associated with a 0.04 (0.02) percentage point increase in today's inflation expectations. The coefficient estimate in Column 2 (Column 4) suggests that moving from the decile with the lowest historical inflation to the decile with the highest historical inflation increases expected inflation today by 1.9 (1.1) percentage points. These estimates are economically sizeable given that the average realized inflation rate during the survey period is 0.7%, and the average expected inflation rate among respondents in this sample is 4.0%.[16]

In Panel B, we present results for the PHF sample.[17] In Column 1 (Column 2), we

[16] In our baseline regressions, we cluster standard errors at the county level. To assess the robustness of our results to alternative clustering methods, Table A2 in Appendix C reports results using different clustering of standard errors. When clustering standard errors at the state level, as suggested by Bester et al. (2011), we find very similar standard errors to those obtained under county-level clustering. The spatial correction proposed by Conley (1999) with different thresholds (25 km, 50 km, 75 km, 100 km, 125 km, and 150 km) results in smaller standard errors and higher statistical significance than clustering standard errors at the county or state level. These findings suggest that our results are robust across different methods of accounting for spatial correlation.

[17] The PHF differs from the other surveys in that missing values are imputed, similar to the Survey of Consumer Finances (SCF) in the U.S. For each observation, five different imputations ("implicates") are provided. Differences between implicates mimic the imputation-induced sampling uncertainty. We follow Rubin (1987) and estimate each regression separately for each of the five implicates. The reported coefficient estimate is the mean of the five coefficient estimates, and we obtain the covariance matrix by averaging across the five covariance matrices and adjusting for the between-implicate variance.

use the logarithm of cumulative local inflation (cumulative local inflation deciles) at the county level as main independent variable. Since we can only use the 2014 wave, there are no unobservable time-varying determinants of inflation expectations, and we only include state fixed effects in this regression. In line with the results in Panel A, we find positive and statistically significant relationships between historical inflation and today's expected inflation. The coefficient estimate in Column 2 implies that moving from the lowest historical inflation decile to the highest inflation decile increases inflation expectations by 0.6 percentage points, a sizeable effect given the average realized inflation rate of 0.9% during the period covered by this survey and the average expected rate of inflation of 2.8% in this sample.

In Panel C, we report results for the BOP-HH sample. In Column 1 (Column 2), we use the logarithm of cumulative local inflation (cumulative local inflation deciles) at the county level as main independent variable. The structure of the data allows us to include interacted state-time fixed effects, which absorb all time-varying characteristics at the state level. Once again, we find positive and significant relationships between historical inflation and expected inflation in both specifications. The coefficient estimate in Column 2 suggests that inflation expectations increase by 0.2 percentage points when moving from the lowest historical inflation decile to the highest, which is lower than the effects observed in the previous two surveys but still sizeable considering the average realized rate of inflation of 2.2% and the average expected rate of inflation of 4.3%.[18] Hence, across all three surveys, despite differences in samples and time periods, we find a positive association between local inflation in the 1920s and today's inflation expectations, supporting the idea that local inflation experiences are transmitted across generations.

We also analyze whether prior generations' inflation experiences matter for households'

[18]Differences in the coefficient estimates observed across the three surveys can be attributed to differences in sampling and time periods. First, all surveys use different samples of respondents. In the PHF and BOP-HH, households are drawn from a few hundred municipalities, whereas GfK draws households from all municipalities in Germany. Moreover, the PHF survey intentionally oversamples wealthy households, while BOP-HH targets the German online population. Second, the surveys are conducted at different times and, hence, under different inflation regimes, which affects, among other things, the level of attention respondents pay to inflation. While the GfK survey covers a time period of low and stable inflation, the BOP-HH survey captures a period of high and volatile inflation. In times of high and volatile inflation, the supply of news about current inflation increases, households are on average better informed about the prevailing inflation rates, and the upward bias observed in consumers' inflation expectations shrinks (e.g., Weber et al., 2024).

attitude towards inflation beyond inflation expectations. To test for such effects, we run probit regressions akin to Equation (1). The dependent variable is a dummy variable, which indicates whether households prioritize fighting inflation as a political goal over maintaining peace and order, increasing citizen influence on government decisions, and protecting the right to free speech, utilizing data from SOEP.

Table 3 presents marginal effects from the probit regressions. With interacted state-time fixed effects, the coefficient estimates are positive but not statistically significant at conventional levels, as reported in Columns 1 and 2. However, with interacted county-time fixed effects, the positive coefficient estimates become statistically significant, as reported in Columns 3 and 4. The coefficient in Column 4 indicates that moving from the decile with the lowest historical inflation to the decile with the highest historical inflation increases the likelihood of ranking the fight against inflation as the highest priority by around 5.4 percentage points, a sizeable increase of almost 40% relative to the unconditional sample mean of 14.0%. These results suggest that the experience of inflation of prior generations can shape attitudes towards inflation beyond inflation expectations.

Finally, we investigate whether in addition to the magnitude also the timing and duration of the inflation exposure influence today's inflation expectations. We hypothesize that the longer individuals were exposed to high inflation, the more deeply ingrained the inflation experience became. To test this conjecture, we first examine which years of the German hyperinflation drive our findings. Specifically, we replicate the regressions from Columns 1 and 2 of Panel A of Table 2, which use GfK data, and decompose cumulative local inflation between 1920 and 1924 into five variables, each capturing inflation at the local level in a specific calendar year.

We present the results in Columns 1 and 2 of Table 4. The coefficients for local inflation in 1920 and 1922 are positive and statistically significant, whereas those for 1921, 1923, and 1924 are not significant at conventional levels. This result suggests that local inflation at the onset of the inflationary period in 1920 and at the beginning of the hyperinflation in 1922 primarily drive our results, rather than local inflation at the peak of the hyperinflation in 1923. One possible explanation is that the hyperinflation experience became more deeply

ingrained when households were hit early on, potentially because households were exposed to high inflation over a longer period.

To test this explanation more directly, we conduct a second analysis. We measure the duration of the exposure to high inflation by counting the number of years a given zip code experienced cumulative annual inflation above 50%, 100%, and 150%, respectively. We then rerun our baseline regression using these three variables as the local historical inflation measure.

We present results in Columns 3 to 5 of Table 4. In Column 3, the coefficient on the variable capturing the number of years with inflation above 50% is close to zero and not statistically significant at conventional levels, suggesting that variation in the length of the exposure to this level of inflation does not matter for today's inflation expectations. However, in Column 4, the coefficient on the variable capturing years with inflation above 100% is positive and statistically significant. Furthermore, in Column 5, when we use the variable for years with inflation above 150%, the coefficient estimate doubles in size and remains statistically significant. These results indicate that localities with prolonged exposure to high inflation exhibit stronger long-term effects on inflation expectations, consistent with the idea that both the timing and the duration of an inflationary period shape inflation expectations over the long term.

5.2 Alternative explanations

In this section, we perform several tests to rule out alternative explanations. One potential concern with our findings is that historical local inflation might proxy for contemporary local inflation. In this case, today's inflation expectations primarily reflect contemporary local inflation rather than historical local inflation. For this alternative explanation to hold, the spatial distribution of current realized inflation would need to align closely with the spatial distribution of historical inflation, implying that local prices have consistently diverged over time, which seems unlikely. Nevertheless, we construct a measure of realized local inflation today and test for a relationship between this measure and historical local inflation to rule

out this alternative explanation. We measure contemporary realized local inflation using the microdata underlying the official German CPI (e.g., Adam et al., 2022). Each month, the Federal Statistical Office and the Statistical Offices of the Federal States of Germany collect price data from various sources, such as on-site visits and web scraping, to produce the official CPI. The microdata contains monthly outlet-level product prices as well as an outlet's eight-digit community identification number (*Amtlicher Gemeindeschlüssel*) and covers the time period from January 2005 to December 2023.[19] We calculate the monthly local realized rate of inflation as the equally-weighted percentage change in prices of all products within an outlet. We match historical local inflation and today's local inflation at the community level.[20] To investigate the relationship between historical local inflation and today's local inflation, we adapt Equation (1) and regress realized local inflation at the outlet-month level on our two measures of historical local inflation, historical local controls, and state-time or county-time fixed effects.

We present the results in Table 5. In all four specifications, the coefficient estimates are negative and not statistically significant at conventional levels.[21] Hence, the spatial distribution of current realized inflation does not align closely with the spatial distribution of historical inflation, rendering it unlikely that local historical inflation proxies for today's local inflation.[22]

[19]In Germany, a community (*Gemeinde*) is the smallest administrative unit and a subunit of counties, somewhat comparable to a U.S. census tract but with governmental functions.

[20]This paper uses data underlying the German CPI for the years 2005 to 2023 (doi: 10.21242/61111.2005.00.00.1.1.0 until 10.21242/61111.2023.00.00.1.1.0). All analyses were performed onsite at the Research Data Center of the Federal Statistical Office and the Statistical Offices of the Federal States of Germany (project number 5042-2024). The analyses, results, and views in this paper are those of the authors and not those of the Federal Statistical Office or the Statistical Offices of the Federal States of Germany.

[21]The basket underlying the CPI is revised every five years. To test whether the relationship between historical local inflation and realized local inflation is affected by these revisions and differs across time, we rerun this analysis separately for four five-year subperiods with constant products and outlets. Results in Table A3 in Appendix C show that the coefficient estimates are similar across subperiods.

[22]We also rerun this analysis using local price data from REWE, Germany's second-largest supermarket chain with more than 3,500 outlets and a market share of around 18% as of 2019. We are grateful to Florian Neumeier for providing us with a dataset tailored to our needs, collected using the approach described in Fuest et al. (2024). For each town with historical inflation data, we select the REWE outlet closest to the town center. Product prices from each outlet's website are then scraped in the 13 weeks from June 17 to September 9, 2022, resulting in almost seven million weekly prices for 16,136 products available in 191 outlets. We compute the weekly local realized rate of inflation for each outlet as the equally-weighted percentage change in the prices of all products available in an outlet and rerun the analysis reported in Columns 1 and 2 of Table 5. In Table A4 in Appendix C, we continue to find statistically insignificant coefficients.

Next, we directly assess whether the relationship between historical local inflation and today's inflation expectations is mediated by contemporary local inflation. To do so, we augment the baseline specification from Panel A of Table 2 with today's realized inflation in the zip code where a respondent resides at the time of the survey, as derived from the microdata underlying the CPI.

The results, reported in Table A5 in Appendix C, indicate that, despite a reduction in sample size, the coefficient on historical local inflation remains positive, statistically significant, and very similar in magnitude, consistent with our baseline findings. The sample size is reduced since some respondents live in zip codes where data for the construction of the CPI are not collected. The coefficient on local realized inflation is positive but not statistically significant at conventional levels. These findings suggest that while current realized local inflation may influence inflation expectations to some degree, it does not drive the observed relationship between historical inflation and today's inflation expectations.

Another alternative explanation for our findings is that historical local inflation might proxy for other local macroeconomic experiences. In this case, omitted macroeconomic experiences are the driver behind the documented effect, not historical inflation. In all our regressions, we control for historical local unemployment. Hence, it is unlikely that our historical local inflation measure proxies for historical local unemployment. Nevertheless, we run an additional test to address this concern. We investigate the relation between historical local inflation and households' expectations of other macroeconomic variables. Using the PHF and the BOP-HH surveys, we replicate our analyses from Panels B and C of Table 2 with expected price changes for real estate, expected interest rates, and expected stock returns as dependent variables.

We report results in Table A6 in Appendix C. When using PHF data in Panel A, we find coefficient estimates that are negative rather than positive, economically small, and not statistically significant at conventional levels. When using the data provided by the BOP-HH survey in Panel B, we continue to estimate insignificant coefficients across all three alternative measures of macroeconomic expectations of households. These results suggest that the relationship between past inflation and current inflation expectations is specific to

inflation and other macroeconomic experiences are unlikely to drive our findings.

5.3 Cross-sectional results

Next, we conduct cross-sectional tests to examine which respondent characteristics drive the relationship between historical inflation and today's inflation expectations. We focus on gender, age, and education, as these variables have been shown to influence inflation expectations (e.g., Malmendier and Nagel, 2016; D'Acunto, Hoang, et al., 2019; D'Acunto et al., 2021). Moreover, we study population density, since existing research documents that rural areas have stronger local coherence and collective memory (e.g., Schindler and Westcott, 2021). To test for these cross-sectional differences, we interact the decile of historical local inflation with these respondent characteristics.

The results, presented in Table A7 in Appendix C, indicate that the interaction terms for gender and age are not statistically significant at conventional levels, suggesting that the impact of the hyperinflation experience does not vary systematically with these characteristics. However, the interaction terms for university education and rural residency are statistically significant. The interaction term is negative for respondents with a university degree, consistent with higher cognitive abilities reducing biases in inflation expectations (e.g., D'Acunto, Hoang, et al., 2019; D'Acunto, Hoang, et al., 2023). Conversely, respondents residing in rural areas show a stronger reliance on local historical inflation when forming expectations, possibly due to a more robust preservation of collective memory in these communities (e.g., Schindler and Westcott, 2021). Taken together, we find results to vary significantly across certain respondent characteristics, providing preliminary insights into potential mechanisms behind the long-term transmission of inflation shocks.

5.4 Mechanism

So far, we have provided evidence for a robust positive relationship between local inflation in Germany between 1920 and 1924 and today's inflation expectations of households. Moreover, the effect does not diminish with age, is modulated by education, and is stronger in rural areas

than in urban areas. We can think of at least two, not mutually exclusive channels through which the experience of the German hyperinflation persists locally across generations. The first channel is the vertical transmission of the hyperinflation experience from parents to their children. The second channel is the horizontal transmission of the hyperinflation experience through collective memory.

5.4.1 Vertical transmission from parents to children

The first mechanism we consider is the vertical transmission of the experience of the hyperinflation from parents to their children.[23] Theories of value transmission suggest that cultural traits are transmitted from one generation to the next (e.g., Bisin and Verdier, 2000, 2001), which is also supported empirically (e.g., Dohmen et al., 2012; Schindler and Westcott, 2021). To test for this channel, we analyze whether results differ for households with and without a migration background. We would expect the relationship between past inflation and today's inflation expectations to be weaker for households with a migration background because the ancestors of these households did not experience the German hyperinflation.[24] We use PHF data, which contain information on respondents' migration status and their parents' migration status. We define two dummy variables, the first is equal to one if a respondent was born abroad and zero otherwise, and the second is equal to one if a respondent's parents were born abroad and zero otherwise. We restrict the sample to respondents born in the E.U. We re-estimate the specification from Panel B of Table 2 and interact our measures of past inflation with the two dummies capturing respondents' migration status.

We report results in Table 6. In both columns, we find positive and significant coefficients

[23] Examples for this channel are abundant in Germany. On December 12, 2022, *Das Erste*, one of the two large German public-service television channels, ran a 45-minute documentary about the long-term effects of the German hyperinflation. It singles out the intergenerational transmission of the experience of the hyperinflation as the channel driving the attitudes of Germans towards inflation today. In one case, a man describes his attitude towards inflation and attributes it to his grandmother's experience of the German hyperinflation: "*[He] is also concerned with [...] inflation. His grandmother Elisabeth plays a certain role in this. It is a classic, such a grandmother most likely exists in many families in Germany.*" (in German: "*[Ihn] beschäftigt auch [...] die Inflation. Seine Oma Elisabeth spielt dabei eine gewisse Rolle. Ein Klassiker, so eine Oma gibt es vermutlich in vielen Familien in Deutschland.*").

[24] We might expect an association between historical inflation and inflation expectations also for migrants, though smaller in magnitudes, because of an assimilation to local norms or other supply-side channels, such as a transmission via the news media, which we discuss below.

on the dummy variables indicating respondents with a migration background. This result is consistent with respondents migrating from high-inflation countries in Europe, such as Italy, Portugal, or Spain, to a low-inflation country, such as Germany, expecting higher inflation than the local population and that this effect extends, though to a lesser degree, to their descendants. More importantly for us, both coefficients on the interaction terms are negative and statistically significant, implying that the link between past inflation and today's inflation expectations is weaker for households with a migration background. Overall, these findings are consistent with the idea that the vertical transmission of the hyperinflation experience from parents to children is part of the reason why inflation shocks shape inflation expectations over multiple generations.

5.4.2 Horizontal transmission through collective memory

The experience of the hyperinflation could also be transmitted horizontally through collective memory.[25] According to Dessí (2008), collective memory refers to a nation's or group's shared interpretations of the past, often communicated through narratives (e.g., textbooks, films, newspapers) that convey values and norms. A large literature argues that collective memory influences beliefs and behavior (e.g., Halbwachs, 1992; Dessí, 2008; Assmann, 2011; Bühler and Madestam, 2023; Fouka and Voth, 2023). In our case, differences in the inflation experienced 100 years ago may have become part of collective memory to a different extent, and these differences might shape attitudes towards inflation to this day. Hence, we would expect more discussion about inflation in areas with higher historical inflation, in particular during periods of higher inflation.

In a first test of the collective memory channel, we study differences in the coverage of inflation in speeches by members of the German parliament. The literature in social and

[25] Rich anecdotal evidence supports the existence of this channel. On February 9, 2024, *Deutschlandfunk*, a national radio broadcaster, aired a 30-minute documentary discussing what can be learned from inflationary periods in the past. It describes the enduring impact of the German hyperinflation as follows: *"The Germans 100 years ago live only from one moment to the next. They are constantly driven by fear. This German fear of inflation is so famous, it has been deeply ingrained into the collective memory [...]"* (in German: "*Die Deutschen vor 100 Jahren, die leben nur noch von einem Moment zum nächsten. Sie sind ständig getrieben von Angst. Diese deutsche Inflationsangst, die ist so berühmt, die hat sich so eingebrannt ins kollektive Gedächtnis [...]*").

political sciences suggests that politicians' speeches reflect collective memories and that such speeches have the potential to influence public opinions (e.g., Cohen, 1999; Adams and Baden, 2022; Fouka and Voth, 2023). If collective memory of the German hyperinflation exists, we would expect politicians whose constituency experienced higher historical inflation in the 1920s to speak more about inflation in parliament. Moreover, we would expect legislators from these voting districts to speak more about inflation when contemporaneous inflation rates are higher, potentially because they share the same collective memory as their voting district or because they cater to the concerns of their constituents. To test for these potential effects, we use a dataset encompassing all statements made in the German parliament since the first legislative period starting in 1949 until the end of the 19^{th} legislative period in 2021. These data are provided by Open Discourse, an independent non-profit organization dedicated to increasing transparency of the parliamentary discourse in Germany.[26] To filter speeches, we drop statements with less than 250 words in length as they often reflect short declarations of consent or objection. We classify a speech as being about inflation by setting a dummy equal to one if it contains the word inflation at least once, and zero otherwise.[27] We augment these data with information on the constituency of legislators, as provided by the archive of the German parliament. We match politicians to historical inflation rates at the constituency level. The resulting sample comprises 54,726 speeches made by 1,324 politicians over 19 legislative periods and 72 years. 8.5% of all speeches contain the word inflation at least once. We estimate regressions similar to Equation (1) at the politician-legislative period level. Specifically, we regress the natural logarithm of the number of speeches on inflation per politician-legislative period on our two measures of historical inflation, politician controls, historical controls, and legislative period fixed effects.[28]

We report results in Table 7. In Panel A, we investigate whether politicians whose constituency experienced higher historical inflation are more likely to give speeches about in-

[26] This paper uses data from Open Discourse version 3 (doi: https://doi.org/10.7910/DVN/FIKIBO).

[27] We follow Henrik et al. (2022) and use four German words for inflation: "*Inflation*" (inflation), "*Preissteigerung*" (price increase), "*Teuerung*" (price increase), and "*Geldentwertung*" (loss of purchasing power).

[28] As politician controls, we include a dummy variable for a politician's gender, age, age squared, dummy variables for marital status, dummy variables for a politician's role in parliament, dummy variables for party membership, the natural logarithm of the number of speeches that a politician holds in a legislative period, and the fraction of negative words across speeches.

flation. In this analysis, we keep only the first legislative period of each politician in the sample. Coefficients on our measures of historical inflation are positive and statistically significant in both columns, indicating that legislators from higher-inflation constituencies talk more about inflation. In Column 1, we find that a 1% increase in local historical inflation is associated with a 0.4% increase in the number of speeches on inflation today. This result supports the conjecture that speeches of politicians shape the collective memory of the German hyperinflation.

In Panel B of Table 7, we analyze whether politicians from constituencies with higher historical inflation are more likely to give speeches about inflation when contemporaneous inflation rates are higher. To do so, we modify the specification from Panel A in three ways. First, since we are interested in how politicians react to changes in inflation, the sample includes repeated observations of politicians. Second, we add an interaction term between historical inflation and average inflation in a legislative period, allowing us to measure the sensitivity of speeches on inflation to contemporaneous inflation. Third, we saturate the regression with state fixed effects.[29] We find the coefficients on the interaction terms to be positive and statistically significant in both columns, suggesting that politicians from constituencies with higher historical inflation indeed talk more about inflation when contemporaneous inflation rates are higher. This finding points towards periods of higher inflation being important to refresh local memories of the hyperinflation.

In a second test of the collective memory channel, we exploit local variation in newspaper coverage of inflation. The media plays a crucial role in shaping public narratives and informing beliefs about historical events (e.g., Goetzmann et al., 2023; Andre et al., 2024). Moreover, media coverage of inflation shapes inflation expectations (e.g., Lamla and Lein, 2014; Larsen et al., 2021). If media coverage indeed reflects collective memories of the hyperinflation, we would expect that newspapers in areas with higher past inflation rates publish more articles about inflation. To test this hypothesis, we retrieve articles published by German newspapers

[29] We do not include politician fixed effects because of insufficient within-politician variation. Out of the 1,324 legislators in our dataset, 477 (36%) show up in one legislative period, 379 (29%) show up in two legislative periods, and only 468 (35%) show up in more than two legislative periods.

from Factiva.[30] We filter for articles published in business sections during the three-year period from August 2018 to July 2021. As with speeches by German politicians, we drop articles with less than 250 words. We merge local historical inflation data for each newspaper via the zip code of the newspaper's editorial office.[31] The resulting sample comprises 68,956 articles published in 99 newspapers. As with speeches by politicians, we classify an article as being about inflation by setting a dummy variable equal to one if the text body contains at least one of the four German words referring to inflation, and zero otherwise. 10.3% of all articles contain the word inflation at least once. We aggregate the data at the newspaper level and estimate regressions akin to Equation (1). Specifically, we regress the natural logarithm of the number of articles on inflation per newspaper on our measures of historical inflation, newspaper controls, and historical controls.[32]

We report results in Table A8 in Appendix C. We observe coefficient estimates that are positive and statistically significant in both columns, suggesting that newspapers located in areas with higher historical inflation print more articles on inflation today. In Column 1, we find that a 1% increase in historical local inflation is associated with a 1.0% increase in the number of articles published by newspapers headquartered in that area today. Hence, the media indeed seems to serve as a local institution that reflects collective memories of the hyperinflation, perpetuates the inflation narrative, and thereby likely shapes attitudes towards inflation over long periods. Taken together, the results in this section are consistent with the idea that the inflation experienced 100 years ago has become part of collective memory, and collective memory transmits inflation experiences of prior generations horizontally.

5.5 Local inflation in the 1920s, current inflation, and today's inflation expectations

We also examine the potential impact of prior generations' experience of the hyperinflation on how households update their expectations to current inflation. Such a relationship would

[30] We are grateful to Jonas Romer for helping us collect the data.

[31] We use the location of the newspaper's editorial office because information on identities of journalists is sparse.

[32] Newspaper controls include the natural logarithm of the number of articles published in a newspaper between August 2018 and July 2021 and the fraction of negative words across articles.

align with associative memory theory, which is rooted in the psychology literature and explains how cues trigger the recall of past experiences (e.g., Kahana, 2012). The theory can explain the formation of inflation expectations, investment decisions, and economic choices more generally (e.g., Bordalo et al., 2020; Bordalo et al., 2023; D'Acunto and Weber, 2023; Charles, 2024; Enke et al., 2024; Gennaioli et al., 2024; Wachter and Kahana, 2024). Hence, we expect households living in areas with higher historical inflation to update inflation expectations more strongly in response to current inflation as they recall the hyperinflation.[33] We employ the BOP-HH sample because these data cover the recent surge in inflation. To test whether the sensitivity of households' inflation expectations to current inflation is a function of historical inflation, we modify the baseline regression from Panel C of Table 2 in three ways. First, because we are interested in changes rather than levels of expectations, we incorporate repeated observations of households and exploit the panel structure of the survey. Second, we introduce an interaction term between historical inflation and current inflation, which captures local differences in the sensitivity of inflation expectations to current country-wide inflation. Third, we saturate the regression with county and time fixed effects instead of interacted state and time fixed effects, which absorb the baseline coefficients on historical county inflation and current monthly inflation, respectively.[34]

We report results in Panel A of Table 8. We obtain coefficient estimates that are positive and statistically significant for both measures of historical inflation. Hence, the experience of higher past inflation is associated with a more pronounced adjustment of inflation expectations to current inflation. This finding indicates that the German hyperinflation not only influences households' contemporary inflation expectations, as observed earlier, but also impacts how households update inflation expectations to current inflation, consistent with memory theory.

An alternative and complementary way of looking at this question is to investigate how households adjust inflation expectations to policy measures that trigger movements in inflation. To do so, we examine a temporary change in the VAT (e.g., D'Acunto et al., 2022;

[33] In Column 1 of Table A9 in Appendix C, we examine whether households update inflation expectations in response to current inflation. The positive and statistically significant coefficient confirms that, on average, subjective inflation expectations are strongly correlated with realized inflation rates in our sample.

[34] We use county fixed effects rather than household fixed effects because the sample comprises only around two observations per household, leaving too little within-household variation for household fixed effects.

Bachmann et al, 2024). Since 2007, VAT rates in Germany equal 19% for most goods and 7% for a selected set of goods of daily consumption, such as certain food items, books, and newspapers, as well as public transport. During the COVID-19 pandemic, on June 3, 2020, the German government announced a temporary reduction of the VAT by 3 and 2 percentage points, respectively, for the time period from July 1 to December 31, 2020. Given the high pass through of changes in VAT into consumer prices, these changes affect realized inflation in predictable ways and hence should also shape inflation expectations (e.g., Montag et al., 2023; Fuest et al., 2024).[35] To study changes in inflation expectations in response to changes in the VAT, we modify the sample and the empirical framework from Panel A of Table 8. Specifically, we construct two symmetric 12-month subsamples centered around the VAT reduction on July 1, 2020, and the subsequent VAT increase on January 1, 2021. We then add interaction terms between our historical inflation measures and dummy variables that equal one for the six months after each event and zero for the six months before each event.

Panel B of Table 8 presents our results. The coefficient estimates for the decrease in the VAT, reported in Columns 1 and 2, are negative but not statistically significant at conventional levels. In contrast, the coefficient estimates for the increase in the VAT, reported in Columns 3 and 4, are positive and statistically significant. Thus, households in areas with higher historical inflation are differentially sensitive to the VAT increase but not differentially sensitive to the VAT reduction when updating their inflation expectations. This asymmetry is consistent with associative memory theory, which posits that inflation increases act as a cue for recalling past inflationary experiences. In contrast, falling inflation fails to provide a similar cue, as it does not resonate with historical memories of inflationary surges. Overall, these results suggest that inflation shocks dating back as far as 100 years can explain today's updating of inflation expectations to current inflation as well as economic policies that affect inflation, such as changes in VAT, but only when these policies are triggering higher inflation expectations.

[35] In Columns 2 and 3 of Table A9 in Appendix C, we investigate how subjective expected inflation rates respond to changes in VAT. The results show that, on average, inflation expectations decrease following a VAT reduction and increase following a VAT hike, although the coefficient for the VAT increase is not statistically significant at conventional levels.

5.6 Local inflation in the 1920s and today's financial decisions

In addition to better understanding how individuals form inflation expectations, we also care about the extent to which historical inflation affects the financial decisions of households via their effect on today's inflation expectations. According to the Fisher equation, higher inflation expectations lead to lower perceived real interest rates (Fisher, 1930). As a result, investments that promise fixed nominal payments become less attractive and we would expect that households in areas with higher historical inflation are less likely to hold fixed-income investments. To investigate the relation between historical inflation and today's wealth allocation into different asset classes, we use data on households' financial wealth from the PHF survey. In particular, we re-estimate Equation (1) with the fraction of financial wealth invested in savings accounts, stocks, and bonds as dependent variables.[36]

Table 9 reports the results. In Columns 1 to 4, the coefficient estimates for the fraction of financial wealth invested in savings accounts and stocks are not statistically significant at conventional levels. However, in Columns 5 and 6, we find that households living in areas with higher historical inflation invest a significantly lower fraction of their financial assets in bonds. This result is consistent with such households expecting higher inflation and therefore perceiving real returns of fixed-income securities to be lower. Taken together, our results are in line with the German hyperinflation not only affecting contemporary attitudes towards inflation but also households' contemporary financial decisions.

5.7 Local inflation in the 1920s and today's inflation expectations in Poland

To test the generalizability of our findings beyond the German context, we rerun our main analysis using data on Polish households. This exercise is possible because a significant share of contemporary Poland was part of Germany during the hyperinflation. We obtain monthly data on inflation expectations of Polish households for the time period from May 2020 to December 2021 from GfK Poland.[37] GfK surveys both German and Polish households as part of

[36] In these regressions, we include variables capturing respondents' financial literacy, risk aversion, and trust as additional household controls.

[37] GfK's inflation expectation data for Poland prior to May 2020 does not include precise information on respondents' locations.

the harmonized E.U. survey on consumer confidence, resulting in surveys that are very comparable. The Polish GfK data also contain zip codes of respondents' place of residence, which we use to match households to towns for which we have historical inflation data. Historical inflation data are available for 97 towns in contemporary Poland that belonged to Germany between 1920 and 1924. After applying similar filters as to the German samples, we end up with 1,428 households. We estimate Equation (1) on this sample of Polish households.[38]

We present results of this test in Table 10. In Columns 1 and 2, we estimate coefficients that are very similar in size to the ones obtained for German households, although they are not statistically significant at conventional levels. The lack of significance may be due to the reduced sample size of Polish households, which is less than 5% of the size of the German sample. Another potential factor is the expulsion of Germans from areas that belonged to Germany prior to the Second World War and are now part of Poland.[39] We would expect the relationship between past inflation and today's inflation expectations to be more pronounced in areas with less expulsion of Germans as the transmission of the hyperinflation experience is likely stronger in these areas. To shed light on the impact of migration, we introduce a proxy for the fraction of the population that migrated away from these areas. Specifically, we collect data on local migration during the years 1944 to 1955 from Steinberg (1991) and scale the sum of migrants by the local population in 1919. We add this proxy to the regression, along with an interaction term of this measure with historical inflation. In Columns 3 and 4, we find that the association between past inflation and today's inflation expectations is stronger in areas with weaker migration. Thus, the results are again consistent with inflation experiences being transmitted across generations and with migration having a strong effect on this relationship. These findings also indicate that the shock of the German hyperinflation

[38]Figure A4 in Appendix C shows the towns for which we have historical inflation data (white dots) as well as cumulative local inflation between 1920 and 1924 for each zip code in contemporary Poland. Darker shading reflects areas with higher cumulative historical inflation. As in Figure A3, considerable variation in local inflation exists.

[39]In September 1939, Poland was invaded by Nazi Germany and the Soviet Union and then divided under the so-called Molotov-Ribbentrop Pact. Nazi Germany and the Soviet Union became war opponents in June 1941, when Nazi Germany invaded the Soviet Union. The war ended in May 1945 with the Soviets having advanced to the West. Large parts of the German-speaking population living in areas that belonged to Germany until the Second World War and Poland thereafter fled from the advancing Soviet troops. For more details, see, for instance, Becker et al. (2020).

pertains not only to households living in today's Germany but also to those living in today's Poland. Finally, we want to emphasize that the areas in contemporary Poland analyzed here were affected by the German hyperinflation but did not experience any inflation for much of the 20^{th} century due to centralized price controls and economic policies under communism. In particular, these areas did not experience the oil price inflation shock of the 1970s. This lack of inflationary episodes makes it unlikely that more recent (local) inflation experiences explain the observed relationship between historical inflation and today's inflation expectations.

6 Implications for monetary policy

Our findings on the long-term persistence of inflation shocks have possibly significant implications for monetary policy, in particular price stability. Inflation stabilization is inherently challenging due to the complexities of managing expectations, and these challenges are further exacerbated by the potentially long-lasting influence of historical inflation episodes. Uribe (2025) shows theoretically that households' inflation expectations, when shaped by inflation experiences, respond more slowly to monetary policy interventions compared to rational expectations. Following a major inflationary episode, central banks must therefore implement larger interest rate increases to achieve their inflation targets, resulting in greater output losses. Moreover, the rate at which agents forget past inflationary episodes increases the cost of inflation stabilization, as a slower decay of inflation experiences requires more aggressive interest rate increases to realign inflation expectations with inflation targets. Our study demonstrates that the memory of inflationary episodes can persist for a century, highlighting the potential of inflationary shocks to increase the costs of stabilization policies significantly.[40]

In summary, the persistence of historical inflation shocks on inflation expectations, which we document, suggests that the recent surge in inflation could have lasting effects on inflation expectations. Our findings emphasize the importance of swift and effective policy responses to inflationary pressures. However, when inflation experiences persist over very long periods,

[40] These theoretical implications align with the policies implemented and advocated by *Deutsche Bundesbank*. Relative to other Western central banks, it adopted significantly tighter monetary policy during the oil price shocks of the 1970s, and its president typically calls for a more conservative policy stance compared to other members of the ECB governing council (e.g., Mee, 2009).

the effectiveness of such responses diminishes, and the associated costs increase. Central banks and fiscal policymakers should carefully consider these long-term effects when designing policies.

7 Conclusion

In this paper, we study potential long-term effects of inflation shocks on households' attitude towards inflation using Germany as a laboratory. We find that households living in areas with higher local inflation during the hyperinflation of the 1920s expect higher inflation around 100 years later. Our results point towards a vertical transmission of inflation experiences from parents to children and a horizontal transmission through collective memory. Historical local inflation also mediates how households update their expectations to current inflation, how households respond to economic policies that affect inflation in predictable ways, and how households make financial decisions. When we study Polish households residing in formerly German areas, we find similar effects as for German households. Overall, our findings are consistent with inflationary shocks impacting attitudes towards inflation across generations. As outlined above, this possibly has important implications for monetary policy.

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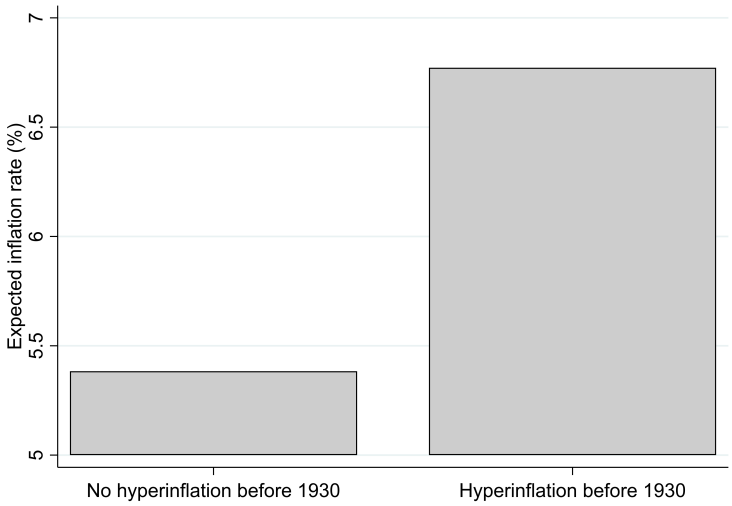
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Figures

Figure 1: Past hyperinflations and today's inflation expectations

This figure shows average expected rates of inflation for households in 2022 for the year 2023 (Panel A) and average realized rates of inflation for the year 2022 (Panel B) separately for European countries that did not experience a hyperinflation before 1930 and for European countries that experienced a hyperinflation before 1930. European countries that did not experience a hyperinflation before 1930 include Belgium, the Czech Republic, Denmark, Estonia, Finland, Greece, Ireland, Island, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the U.K. European countries that experienced a hyperinflation before 1930 include Austria, France, Germany, Hungary, Poland, and Russia. Data on expected and realized inflation rates are from the Organization for Economic Co-operation and Development (OECD), except for Russia. Data on realized inflation rates of Russia are from the Russian Federal State Statistics Service. Data on historical hyperinflations are from Hanke and Krus (2013).

Panel A: Expected inflation rates



Panel B: Realized inflation rates

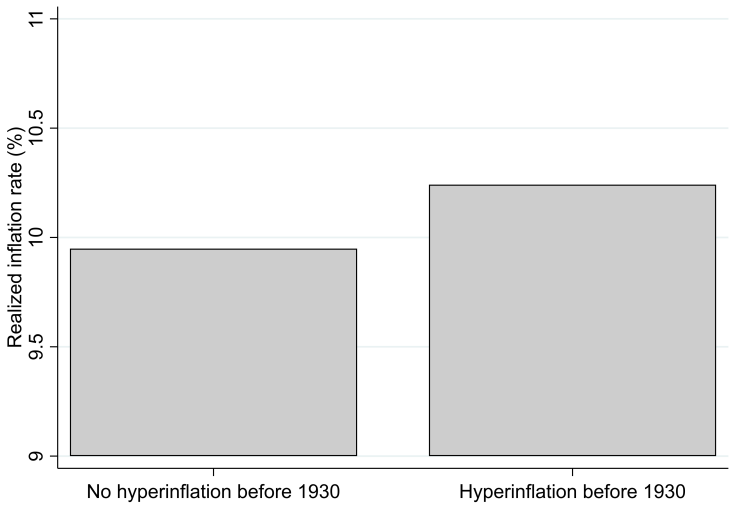
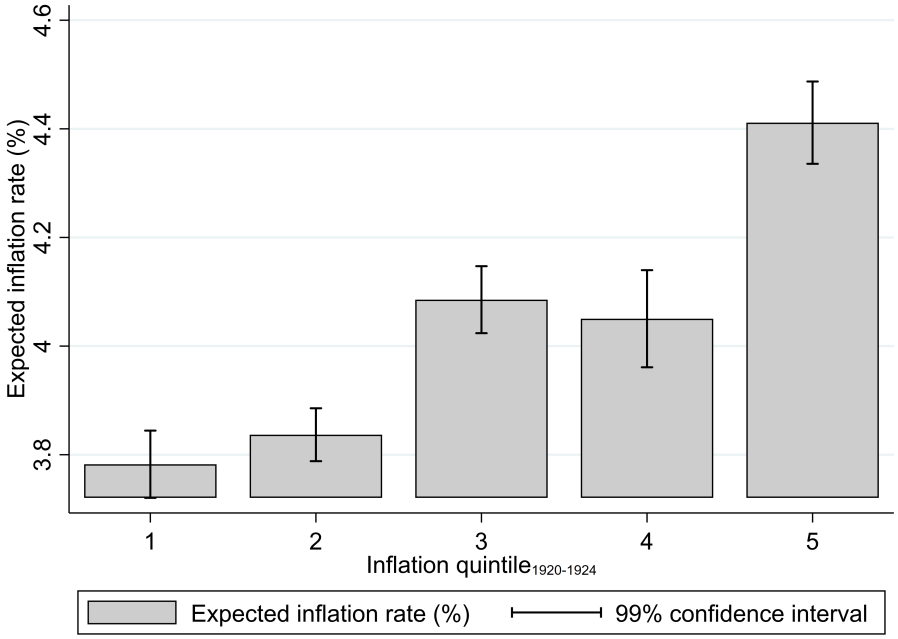


Figure 2: Local inflation in the 1920s and today's inflation expectations

This figure shows average expected rates of inflation over the next 12 months for households living in zip codes with different historical local inflation. We sort zip codes into quintiles based on the cumulative local inflation between January 1920 and December 1924. We assign zip codes to the closest town for which we have historical inflation data within a 20-kilometer radius. The sample is based on the GfK Consumer Climate MAXX survey. The figure shows point estimates together with 99% confidence intervals.



Tables

Table 1: Descriptive statistics

This table presents descriptive statistics on household characteristics, household expectations, and historical inflation. In Panel A, the sample is based on the GfK Consumer Climate MAXX survey. In Panel B, the sample is based on *Deutsche Bundesbank*'s PHF. In Panel C, the sample is based on *Deutsche Bundesbank*'s BOP-HH. In Panel D, the sample is based on the SOEP. Appendix A provides detailed descriptions of all variables used throughout the study.

Panel A: GfK data

	Mean	Median	Std. dev.	N
Household characteristics				
Female (d)	0.538	1.000	0.499	30,899
Age (years)	50.76	51.00	16.72	30,899
University (d)	0.132	0.000	0.338	30,899
Net income per month (EUR)	2,507	2,250	1,009	25,740
Rural area (d)	0.306	0.000	0.461	30,899
Household expectations				
Expected inflation rate over next 12 months (%)	3.97	3.00	3.79	30,899
Historical local inflation				
Avg. monthly inflation rate between 1920 and 1924 (%)	886.09	895.49	304.58	30,899
- 1920	7.36	7.39	1.09	30,899
- 1921	4.75	4.66	0.70	30,899
- 1922	38.49	38.35	0.99	30,899
- 1923	4,387.71	4,403.44	1,511.83	30,899
- 1924	0.69	0.70	0.65	30,899

Panel B: Bundesbank data (PHF)

	Mean	Median	Std. dev.	N
Household characteristics				
Female (d)	0.405	0.000	0.491	3,446
Age (years)	55.74	57.00	16.10	3,446
Gross income per month (EUR)	6,193	4,471	7,933	3,446
Net wealth (EUR)	447,585	193,693	1,410,178	3,446
% savings account	28.76	16.30	31.34	3,446
% stocks	6.98	0.00	17.20	3,446
% bonds	2.71	0.00	10.48	3,446
Household expectations				
Expected inflation rate over next 12 months (%)	2.80	2.00	3.23	3,446
Expected inflation rate for real estate over next 12 months (%)	3.34	2.50	4.47	3,051
Expected interest rate over next 12 months (%)	0.78	0.50	0.61	2,932
Expected stock return over next 12 months (%)	0.88	0.00	4.99	2,374
Historical local inflation				
Avg. monthly inflation rate between 1920 and 1924 (%)	892.35	867.17	288.18	3,446

Panel C: Bundesbank data (BOP–HH)

	Mean	Median	Std. dev.	N
Household characteristics				
Female (d)	0.417	0.000	0.493	29,611
Age (years)	55.44	57.00	15.59	29,611
Net income per month (EUR)	3,812	3,250	1,928	29,611
Household expectations				
Expected inflation rate over next 12 months (%)	4.29	3.50	3.92	29,611
Historical local inflation				
Avg. monthly inflation rate between 1920 and 1924 (%)	897.12	867.17	300.12	29,611

Panel D: DIW data (SOEP)

	Mean	Median	Std. dev.	N
Household characteristics				
Female (d)	0.444	0.000	0.497	17,967
Age (years)	48.42	47.00	16.433	17,967
Net income per month (EUR)	2,064	2,066	1,128	17,967
Attitudes towards inflation				
Fight against inflation most important (d)	0.140	0.000	0.347	17,967
Historical local inflation				
Avg. monthly inflation rate between 1920 and 1924 (%)	899.06	880.88	334.21	17,967

Table 2: Local inflation in the 1920s and today's inflation expectations

This table presents the results from OLS regressions with (interacted) location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. In Panel A, local inflation is computed at the zip code level. In Panels B and C, local inflation is computed at the county level. Household controls include, whenever possible, a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. In Panel A, the sample is based on the GfK Consumer Climate MAXX survey. In Panel B, the sample is based on *Deutsche Bundesbank's* PHF. In Panel C, the sample is based on *Deutsche Bundesbank*'s BOP-HH. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used for each survey. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: GfK data

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Log(inflation)$_{1920-1924}$	3.631***		2.011	
	(3.07)		(1.60)	
Inflation decile$_{1920-1924}$		0.213***		0.123**
		(3.37)		(2.02)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	No	No
County-time fixed effects	No	No	Yes	Yes
Adj. R^2	0.076	0.079	0.332	0.332
N	30,899	30,899	30,899	30,899

Panel B: Bundesbank data (PHF)

	Expected inflation rate (%)	
	(1)	(2)
Log(inflation)$_{1920-1924}$	2.081***	
	(2.83)	
Inflation decile$_{1920-1924}$		0.072**
		(2.14)
Household controls	Yes	Yes
Historical controls	Yes	Yes
State fixed effects	Yes	Yes
Adj. R^2	0.069	0.069
N	3,446	3,446

Panel C: Bundesbank data (BOP–HH)

	Expected inflation rate (%)	
	(1)	(2)
$\text{Log(inflation)}_{1920-1924}$	0.682**	
	(2.53)	
$\text{Inflation decile}_{1920-1924}$		0.026**
		(2.08)
Household controls	Yes	Yes
Historical controls	Yes	Yes
State-time fixed effects	Yes	Yes
Adj. R^2	0.115	0.115
N	29,611	29,611

Table 3: Local inflation in the 1920s and today's attitudes towards inflation

This table presents the results from probit regressions with interacted location and time fixed effects. The dependent variable is a dummy variable that equals one for respondents who rank "fighting inflation" as the most important political goal, relative to "maintaining peace and order in this country", "increasing citizens' influence on government decisions", and "protecting the right to free speech". The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the zip code level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, and dummy variables for urban and rural areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the SOEP. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. We report marginal effects. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Fight against inflation (d)			
	(1)	(2)	(3)	(4)
$\text{Log(inflation)}_{1920-1924}$	0.034		0.080*	
	(1.30)		(1.92)	
$\text{Inflation decile}_{1920-1924}$		0.002		0.006***
		(1.30)		(2.64)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	No	No
County-time fixed effects	No	No	Yes	Yes
Pseudo R^2	0.095	0.095	0.138	0.138
N	17,967	17,967	17,967	17,967

Table 4: Local inflation in the 1920s by year, duration of exposure, and today's inflation expectations

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)*$_{Year}$ is the natural logarithm of cumulative local inflation for each calendar year from 1920 to 1924. The variable *Inflation decile*$_{Year}$ is the decile of cumulative local inflation for each calendar year from 1920 to 1924. *# years with inflation > X%* is the number of years from 1920 to 1924 with cumulative annual local inflation over X%. Local inflation is computed at the zip code level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, and dummy variables for urban and rural areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the GfK Consumer Climate MAXX survey. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)				
	(1)	(2)	(3)	(4)	(5)
Log(inflation)$_{1920}$	4.047***				
	(3.23)				
Log(inflation)$_{1921}$	0.722				
	(0.25)				
Log(inflation)$_{1922}$	6.765**				
	(2.36)				
Log(inflation)$_{1923}$	2.226				
	(1.05)				
Log(inflation)$_{1924}$	1.555				
	(0.73)				
Inflation decile$_{1920}$		0.176***			
		(3.59)			
Inflation decile$_{1921}$		0.013			
		(0.16)			
Inflation decile$_{1922}$		0.119*			
		(1.77)			
Inflation decile$_{1923}$		0.012			
		(0.20)			
Inflation decile$_{1924}$		0.015			
		(0.29)			
# years with inflation > 50%			-0.191		
			(-0.34)		
# years with inflation > 100%				0.509**	
				(1.97)	
# years with inflation > 150%					0.903*
					(1.81)
Household controls	Yes	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.084	0.084	0.068	0.070	0.073
N	30,899	30,899	30,899	30,899	30,899

Table 5: Local inflation in the 1920s and today's realized inflation

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the realized rate of inflation at the outlet-month level. The variable *Log(inflation)* $_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Historical local inflation is computed at the community level. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the data underlying the German CPI sourced from the Federal Statistical Office and the Statistical Offices of the Federal States of Germany. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Realized inflation rate (%)			
	(1)	(2)	(3)	(4)
$\text{Log(inflation)}_{1920-1924}$	-0.033		-0.010	
	(-0.85)		(-0.13)	
$\text{Inflation decile}_{1920-1924}$		-0.002		-0.004
		(-1.07)		(-1.08)
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	No	No
County-time fixed effects	No	No	Yes	Yes
Adj. R^2	0.012	0.012	0.014	0.014
N	7,800,691	7,800,691	7,800,691	7,800,691

Table 6: Local inflation in the 1920s, migration, and today's inflation expectations

This table presents the results from OLS regressions with location fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the county level. *Born abroad (d)* is a dummy variable that equals one for respondents who were not born in Germany and zero for respondents who were born in Germany. *Parents born abroad (d)* is a dummy variable that equals one for respondents whose parents were not born in Germany and zero for respondents whose parents were born in Germany. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on *Deutsche Bundesbank*'s PHF and comprises only respondents born in the E.U. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. T-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)	
	(1)	(2)
Inflation decile$_{1920-1924}$	0.083**	0.093***
	(2.43)	(2.81)
Born abroad (d)	1.360*	
	(1.96)	
Inflation decile × Born abroad (d)	-0.253**	
	(-2.45)	
Parents born abroad (d)		0.683**
		(2.49)
Inflation decile × Parents born abroad (d)		-0.157***
		(-3.41)
Household controls	Yes	Yes
Historical controls	Yes	Yes
State fixed effects	Yes	Yes
Adj. R^2	0.072	0.075
N	3,268	3,245

Table 7: Local inflation in the 1920s and today's political coverage of inflation

This table presents the results from OLS regressions with location and time fixed effects. The dependent variable is the natural logarithm of the number of speeches on inflation that a politician holds in a legislative period. The variable *Log(inflation)$_{1920\text{-}1924}$* is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile$_{1920\text{-}1924}$* is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the constituency level. The variable *Contemporaneous inflation (%)* is the average year-over-year national realized rate of inflation in a legislative period. Politician controls include a dummy variable for gender, age, age squared, dummy variables for marital status, dummy variables for a politician's role in parliament, dummy variables for party membership, the natural logarithm of the number of speeches that a politician holds in a legislative period, and the fraction of negative words across speeches. Historical controls include the average local unemployment rate between January 1920 and December 1924 in a constituency, a dummy variable for constituencies occupied by the French or Belgian army, and a dummy variable for constituencies with a local branch of the *Reichsbank*. The sample is based on data from Open Discourse. In Panel A, we keep only the first legislative period of each politician. In Panel B, the sample includes all legislative periods. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the state level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: Local inflation in the 1920s and today's political coverage of inflation

	Log(# speeches on inflation)	
	(1)	(2)
Log(inflation)$_{1920-1924}$	0.446***	
	(4.09)	
Inflation decile$_{1920-1924}$		0.018***
		(3.10)
Politician controls	Yes	Yes
Historical controls	Yes	Yes
Time fixed effects	Yes	Yes
Adj. R^2	0.342	0.340
N	1,324	1,324

Panel B: Local inflation in the 1920s, contemporaneous inflation, and today's political coverage of inflation

	Log(# speeches on inflation)	
	(1)	(2)
Log(inflation)$_{1920-1924}$	-0.013	
	(-0.06)	
Log(inflation)$_{1920-1924}$ × Contemporaneous inflation (%)	0.112**	
	(2.25)	
Inflation decile$_{1920-1924}$		-0.003
		(-0.25)
Inflation decile$_{1920-1924}$ × Contemporaneous inflation (%)		0.005*
		(1.91)
Politician controls	Yes	Yes
Historical controls	Yes	Yes
Time fixed effects	Yes	Yes
State fixed effects	Yes	Yes
Adj. R^2	0.349	0.349
N	3,183	3,183

Table 8: Local inflation in the 1920s, current inflation, and today's inflation expectations

This table presents the results from OLS regressions with location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)$_{1920\text{-}1924}$* is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile$_{1920\text{-}1924}$* is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the county level. The variable *Current inflation (%)* is the year-over-year national realized rate of inflation in a certain month. The variable *Post VAT decrease (d)* equals one after the VAT decrease (July 1, 2020, onward), and zero otherwise. The variable *Post VAT increase (d)* equals one after the VAT increase (January 1, 2021, onward), and zero otherwise. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on *Deutsche Bundesbank*'s BOP-HH and includes repeated observations. In Columns 1 and 2 (Columns 3 and 4) of Panel B, we focus on a 12-month window centered around the VAT decrease (increase) on July 1, 2020 (January 1, 2021). Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level

Panel A: Current inflation

	Expected inflation rate (%)	
	(1)	(2)
Log(inflation)$_{1920-1924}$ × Current inflation (%)	0.163***	
	(2.89)	
Inflation decile$_{1920-1924}$ × Current inflation (%)		0.008***
		(3.05)
Household controls	Yes	Yes
Historical controls	Yes	Yes
County fixed effects	Yes	Yes
Time fixed effects	Yes	Yes
Adj. R^2	0.113	0.113
N	64,099	64,099

Panel B: Changes in VAT

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Log(inflation)$_{1920-1924}$ × Post VAT decrease (d)	-0.195			
	(-0.27)			
Inflation decile$_{1920-1924}$ × Post VAT decrease (d)		-0.006		
		(-0.21)		
Log(inflation)$_{1920-1924}$ × Post VAT increase (d)			0.800**	
			(2.04)	
Inflation decile$_{1920-1924}$ × Post VAT increase (d)				0.035**
				(2.02)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Adj. R^2	0.104	0.104	0.080	0.080
N	16,248	16,248	28,932	28,932

Table 9: Local inflation in the 1920s and today's financial decisions

This table presents the results from OLS regressions with location fixed effects. The dependent variable is either the fraction of financial assets held in the savings account (Columns 1 and 2), the fraction of financial assets invested in individual stocks or equity mutual funds (Columns 3 and 4), or the fraction of financial assets invested in individual bonds or bond mutual funds (Columns 5 and 6). The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the county level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, a dummy variable for living in East Germany in 1989, and variables capturing financial literacy, risk aversion, and trust. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on *Deutsche Bundesbank*'s PHF. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	% savings account		% stocks		% bonds	
	(1)	(2)	(3)	(4)	(5)	(6)
Log(inflation)$_{1920-1924}$	2.686		-2.684		-6.039**	
	(0.37)		(-0.63)		(-2.37)	
Inflation decile$_{1920-1924}$		0.167		-0.068		-0.262**
		(0.51)		(-0.34)		(-2.21)
Household controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.091	0.091	0.120	0.120	0.054	0.053
N	3,395	3,395	3,395	3,395	3,395	3,395

Table 10: Local inflation in the 1920s and today's inflation expectations in Poland

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the zip code level. The variable *% displaced* is the fraction of the local population that migrated away between 1944 and 1955. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, and dummy variables for urban and rural areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the Polish section of the GfK Consumer Climate MAXX survey. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Log(inflation)$_{1920-1924}$	2.146		15.788	
	(0.47)		(1.67)	
Inflation decile$_{1920-1924}$		0.103		0.689*
		(0.58)		(1.86)
% displaced			13.446*	0.079
			(1.73)	(0.73)
Log(inflation) × % displaced			-0.513*	
			(-1.74)	
Inflation decile × % displaced				-0.022*
				(-1.91)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	Yes	Yes
Adj. R^2	0.066	0.066	0.060	0.061
N	1,428	1,428	1,376	1,376

Appendix A: Variable descriptions

Variable	Description
Household characteristics	
Female (d)	Dummy variable that equals one for female respondents and zero for male respondents
Age (years)	Age of the respondent (in years)
Below middle school (d), Middle school (d), High school (d), University (d), etc.	Dummy variables that capture a respondent's highest educational attainment
Single (d), Couple (d), Married (d), Separated (d), etc.	Dummy variables that capture a respondent's marital status
Full-time (d), Part-time (d), Unemployed (d), Self-employed (d), etc.	Dummy variables that capture a respondent's employment status
Net income per month (EUR)	Net income of the household per month (in Euro)
Gross income per month (EUR)	Gross income of the household per month (in Euro)
Net wealth (EUR)	Net wealth of the household (in Euro)
% savings account	$\frac{Value\ of\ savings\ account}{Value\ of\ financial\ assets}$
% stocks	$\frac{Value\ of\ individual\ stocks\ and\ equity\ mutual\ funds}{Value\ of\ financial\ assets}$
% bonds	$\frac{Value\ of\ individual\ bonds\ and\ bond\ mutual\ funds}{Value\ of\ financial\ assets}$
Rural area (d), Urban area (d)	Dummy variables that capture the population density of the area in which a respondent lives; we classify areas with less than 20,000 residents as rural and areas with more than 100,000 residents as urban
East in 1989 (d)	Dummy variable that equals one for respondents who lived in East Germany in 1989, and zero otherwise
Born abroad (d)	Dummy variable that equals one for respondents who were not born in Germany and zero for respondents who were born in Germany; we compute this variable only for respondents born in the E.U.
Parents born abroad (d)	Dummy variable that equals one for respondents whose parents were not born in Germany and zero for respondents whose parents were born in Germany; we compute this variable only for respondents born in the E.U.
Financial literacy	Number of correct answers of the respondent to three financial literacy questions (Lusardi and Mitchell, 2011)
Risk aversion	Risk aversion of the respondent (on a scale from 0 to 10)
Trust	Trust of the respondent in other people (on a scale from 0 to 10)
Household expectations	
Expected inflation rate (%)	Point forecast of the expected rate of inflation over the next 12 months; we set top and bottom percentiles of this variable to missing
Expected inflation rate for real estate (%)	Point forecast of the expected rate of inflation for real estate over the next 12 months; we set top and bottom percentiles of this variable to missing

Expected interest rate (%)	Point forecast of the expected rate of interest over the next 12 months; we set top and bottom percentiles of this variable to missing
Expected stock return (%)	Point forecast of the expected rate of return on stocks over the next 12 months; we set top and bottom percentiles of this variable to missing
Fight against inflation (d)	Dummy variable that equals one for respondents who rank "fighting inflation" as the most important political goal, relative to "maintaining peace and order in this country", "increasing citizens' influence on government decisions", and "protecting the right to free speech"
Historical local inflation	
Monthly inflation rate (%)	Monthly local realized rate of inflation
Log(inflation)	$Ln(monthly\,inflation\,rate + \sqrt{monthly\,inflation\,rate^2 + 1})$
Cumulative inflation $\text{rate}_{1920-1924}$	Cumulative local realized rate of inflation between January 1920 and December 1924
$\text{Log(inflation)}_{1920-1924}$	$Ln(cumulative\,inflation\,rate)$
$\text{Inflation decile}_{1920-1924}$	Decile of cumulative inflation rate
# years with inflation > X%	Number of years from 1920 to 1924 with cumulative annual local realized rate of inflation over X%
Other historical local variables	
Population	Number of inhabitants in a town according to the census in October 1919
Log(population)	$Ln(population + 1)$
Unemployment rate	$\frac{Number\,of\,unemployed\,in\,a\,town\,at\,the\,end\,of\,the\,month}{Population}$; we impute the unemployment rate by using the past unemployment rate of the town or the current unemployment rate of the state in which the town is located
Unemployment $\text{rate}_{1920-1924}$	Average unemployment rate between January 1920 and December 1924
Occupied (d)	Dummy variable that equals one for towns occupied by the French or Belgium army, and zero otherwise
$\text{Occupied (d)}_{1920-1924}$	Dummy variable that equals one for towns occupied by the French or Belgium army at some point between January 1920 and December 1924, and zero otherwise
German Central Bank (d)	Dummy variable that equals one for towns with a branch of the German Central Bank, and zero otherwise,
German Central Bank $\text{(d)}_{1920-1924}$	Dummy variable that equals one for towns with a branch of the German Central Bank at some point between January 1920 and December 1924, and zero otherwise
Politician characteristics	
# speeches on inflation	Number of speeches on inflation that a politician holds in a legislative period; we use four German words to identify speeches on inflation: "*Inflation*" (inflation), "*Preissteigerung*" (price increase), "*Teuerung*" (price increase), and "*Geldentwertung*" (loss of purchasing power)
Log(# speeches on inflation)	$Ln(\#\,speeches\,on\,inflation + 1)$
Female (d)	Dummy variable that equals one for female politicians and zero for male politicians
Age (years)	Age of the politician (in years)

Single (d), Couple (d), Married (d), Separated (d), etc.	Dummy variables that capture a politician's marital status
Member of parliament (d), Minister (d), Chancellor (d), etc.	Dummy variables that capture a politician's role in parliament
SPD (d), CDU/CSU (d), FDP (d), etc.	Dummy variables that capture a politician's party membership
# speeches	Number of speeches that a politician holds in a legislative period
Log(# speeches)	$Ln(\#\ speeches)$
% negative words	Fraction of negative words across speeches that a politician holds in a legislative period; we use a word list based on the Harvard IV-4 dictionary to identify negative words (Remus et al., 2010)
Newspaper characteristics	
# articles on inflation	Number of articles on inflation published in a newspaper between August 2018 and July 2021; we use four German words to identify articles on inflation: "*Inflation*" (inflation), "*Preissteigerung*" (price increase), "*Teuerung*" (price increase), and "*Geldentwertung*" (loss of purchasing power)
Log(# articles on inflation)	$Ln(\#\ articles\ on\ inflation + 1)$
# articles	Number of articles published in a newspaper between August 2018 and July 2021
Log(# articles)	$Ln(\#\ articles)$
% negative words	Fraction of negative words across articles published in a newspaper between August 2018 and July 2021; we use a word list based on the Harvard IV-4 dictionary to identify negative words (Remus et al., 2010)
Other variables	
Realized inflation rate (%)	Monthly realized rate of inflation at the outlet level; we compute the realized rate of inflation at the outlet-month level as the equally-weighted average rate of inflation across all products of an outlet in a month
Contemporaneous inflation (%)	Average year-over-year national realized rate of inflation in a legislative period
Current inflation (%)	Year-over-year national realized rate of inflation
Post VAT decrease (d)	Dummy variable that equals one after the VAT decrease (July 1, 2020, onward), and zero otherwise
Post VAT increase (d)	Dummy variable that equals one after the VAT increase (January 1, 2021, onward), and zero otherwise
% displaced	$\frac{Number\ of\ persons\ that\ migrated\ away\ from\ an\ area\ between\ 1944\ and\ 1955}{Population}$

Appendix B: Overview of household control variables

	GfK	PHF	BOP-HH	SOEP	GfK Poland
Gender	Female (d)	Female (d)	Female (d)	Female (d)	Female (d)
Age	Age Age^2	Age Age^2	Age Age^2	Age Age^2	Age Age^2
Highest educational attainment	Middle school (d) High school (d) University (d)	Middle school (d) High school (d) University (d) Other (d)	Middle school (d) High school (d) University (d) Other (d)	High school (d) Above high school (d)	Middle school(d) High school (d) University(d)
Marital status	Couple (d) Married (d) Separated/divorced/widowed (d)	Married (d) Separated (d) Divorced (d) Widowed (d)	Couple (d) Married (d) Separated (d) Divorced (d) Widowed (d)	Married (d) Separated (d) Divorced (d) Widowed (d)	Married/couple (d) Separated/divorced (d) Widowed (d)
Employment status	Part-time (d) Unemployed (d) Self-employed (d) Full-time education (d) Retired (d) Housekeeping (d)	Part-time (d) On leave (d) Unemployed (d) Full-time education (d) Retired (d) Disabled (d) Housekeeping (d) Other (d)	Part-time (d) On leave (d) Unemployed (d) Full-time education (d) Retired (d) Disabled (d) Housekeeping (d) Other (d)	Part-time (d) On leave (d) Unemployed (d) Full-time education (d) Retired (d) Disabled (d) Other (d)	Part-time (d) Unemployed (d) Self-employed (d) Full-time education (d) Retired (d) Housekeeping (d)
Household income	$Ln(net\ income+\sqrt{net\ income^2+1})$ Missing (d) (net income is set to zero if net income is missing)	$Ln(gross\ income+\sqrt{gross\ income^2+1})$	$Ln(net\ income+\sqrt{net\ income^2+1})$	$Ln(net\ income+\sqrt{net\ income^2+1})$	$Ln(net\ income+\sqrt{net\ income^2+1})$
Household wealth	Not available	$Ln(net\ wealth+\sqrt{net\ wealth^2+1})$	$Ln(net\ wealth+\sqrt{net\ wealth^2+1})$	Not available	Not available
Population density	Rural area (d) Urban area (d)	Rural area (d) Urban area (d)	Rural area (d) Urban area (d)	Rural area (d) Urban area (d)	Rural area (d) Urban area (d)
East Germany in 1989	Not available	East in 1989 (d)	East in 1989 (d)	East in 1989 (d)	Not available

Appendix C: Additional figures and tables

Figure A1: Consumer price indices in Germany, the rest of Europe, and the U.S. between 1870 and 2020

This figure shows national CPIs for Germany, the rest of Europe, and the U.S. between 1870 and 2020. The rest of Europe includes Belgium, Denmark, Finland, France, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the U.K. CPIs are set to one at the beginning of each decade. Data on consumer price indices are from Jordà et al. (2017).

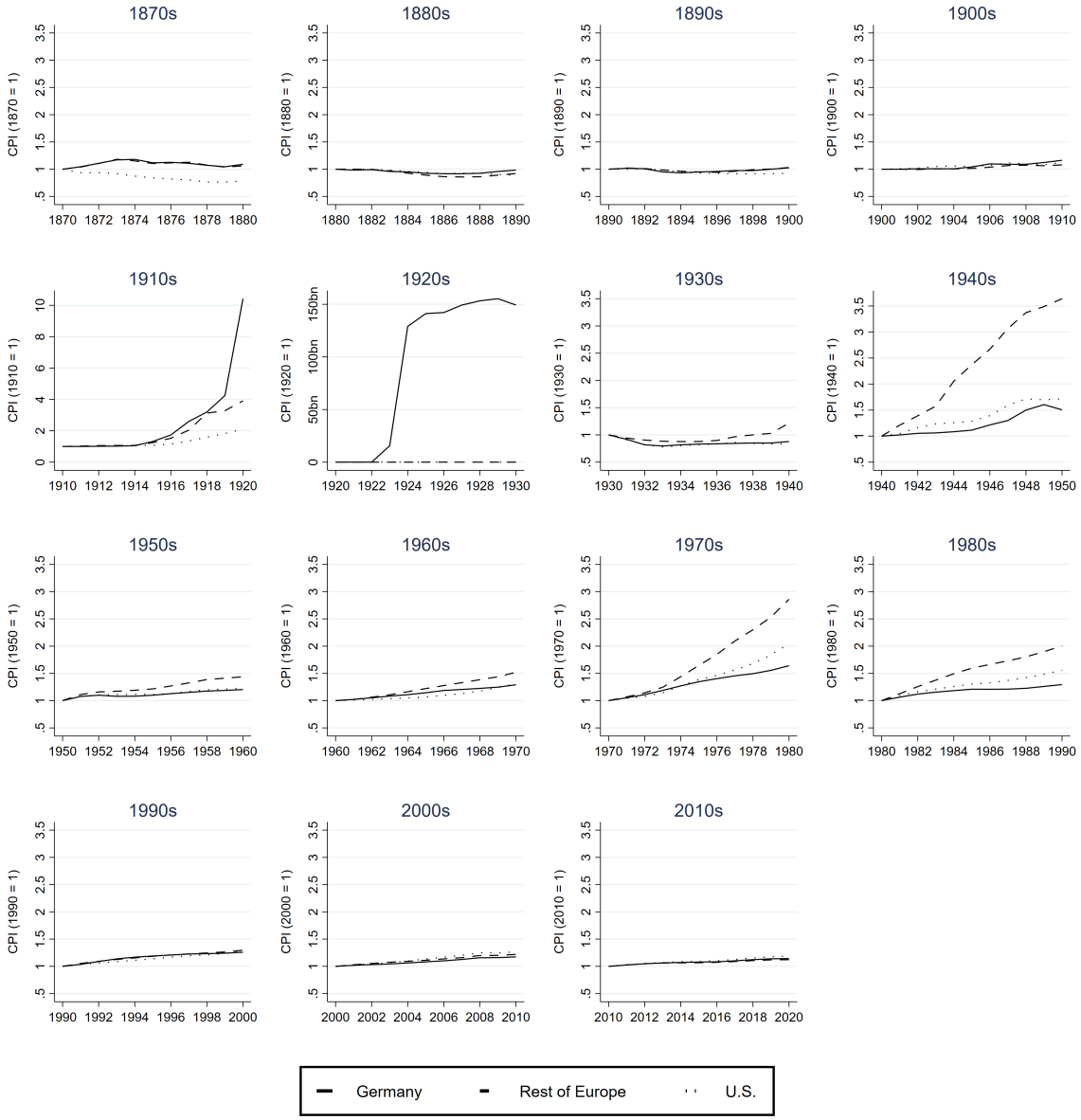
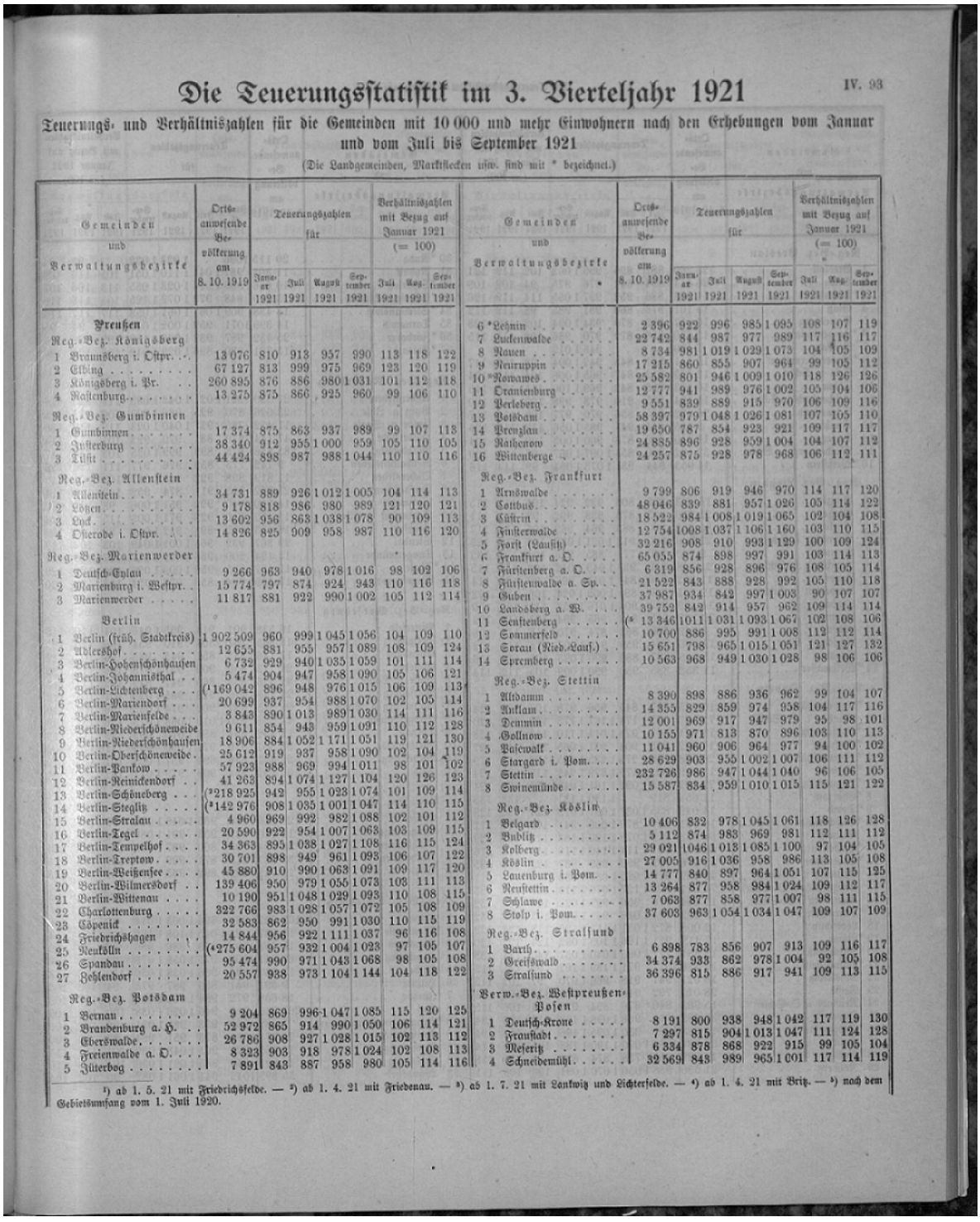


Figure A2: Sample page from the Quarterly Issue of the German Statistical Office
This figure shows a sample page from the Quarterly Issue of the German Statistical Office.



Die Teuerungsstatistik im 3. Vierteljahr 1921

IV. 93

Teuerungs- und Verhältniszahlen für die Gemeinden mit 10 000 und mehr Einwohnern nach den Erhebungen vom Januar und vom Juli bis September 1921

(Die Landgemeinden, Marktflecken usw. sind mit * bezeichnet.)

Gemeinden und Verwaltungsbezirke	Ortsanwesende Bevölkerung am 8. 10. 1919	Teuerungszahlen für Januar 1921	Teuerungszahlen für Juli 1921	Teuerungszahlen für August 1921	Teuerungszahlen für September 1921	Verhältniszahlen mit Bezug auf Januar 1921 (= 100) Juli 1921	Verhältniszahlen mit Bezug auf Januar 1921 (= 100) Aug. 1921	Verhältniszahlen mit Bezug auf Januar 1921 (= 100) September 1921
Preußen								
Reg.-Bez. Königsberg								
1 Braunsberg i. Ostpr.	13 076	810	913	957	990	113	118	122
2 Elbing	67 127	813	999	975	969	123	120	119
3 Königsberg i. Pr.	260 895	876	886	980	1 031	101	112	118
4 Rastenburg	13 275	875	866	925	960	99	106	110
Reg.-Bez. Gumbinnen								
1 Gumbinnen	17 374	875	863	937	989	99	107	113
2 Insterburg	38 340	912	955	1 000	959	105	110	105
3 Tilsit	44 424	898	987	988	1 044	110	110	116
Reg.-Bez. Allenstein								
1 Allenstein	34 731	889	926	1 012	1 005	104	114	113
2 Lyck	9 178	818	986	980	989	121	120	121
3 Lyck	13 602	956	863	1 038	1 078	90	109	113
4 Oberode i. Ostpr.	14 826	825	909	958	987	110	116	120
Reg.-Bez. Marienwerder								
1 Deutsch-Eylau	9 266	963	940	978	1 016	98	102	106
2 Marienburg i. Westpr.	15 774	797	874	924	943	110	116	118
3 Marienwerder	11 817	881	922	990	1 002	105	112	114
Berlin								
1 Berlin (früh. Stadtkreis)	1 902 509	960	999	1 045	1 056	104	109	110
2 Adlershof	12 655	881	955	957	1 089	108	109	124
3 Berlin-Hohenschönhausen	6 732	929	940	1 035	1 059	101	111	114
4 Berlin-Johannisthal	5 474	904	947	958	1 090	105	106	121
5 Berlin-Lichtenberg	(1) 169 042	896	948	976	1 015	106	109	113
6 Berlin-Mariendorf	20 699	937	954	988	1 070	102	105	114
7 Berlin-Marienfelde	3 843	890	1 013	989	1 030	114	111	116
8 Berlin-Niederschöneweide	9 611	854	943	959	1 091	110	112	128
9 Berlin-Niederschönhausen	18 906	884	1 052	1 171	1 051	119	121	130
10 Berlin-Oberschöneweide	25 612	919	937	958	1 090	102	104	119
11 Berlin-Pankow	57 923	988	969	994	1 011	98	101	102
12 Berlin-Reinickendorf	41 263	894	1 074	1 127	1 104	120	126	123
13 Berlin-Schöneberg	(2) 218 925	942	955	1 023	1 074	101	109	114
14 Berlin-Steglitz	(2) 142 976	908	1 035	1 001	1 047	114	110	115
15 Berlin-Stralau	4 960	969	992	982	1 088	102	101	112
16 Berlin-Tegel	20 590	922	954	1 007	1 063	103	109	115
17 Berlin-Tempelhof	34 363	895	1 038	1 027	1 108	116	115	124
18 Berlin-Treptow	30 701	898	949	961	1 093	106	107	122
19 Berlin-Weißensee	45 880	910	990	1 063	1 091	109	117	120
20 Berlin-Wilmersdorf	139 406	950	979	1 055	1 073	103	111	113
21 Berlin-Wittenau	10 190	951	1 048	1 029	1 093	110	108	115
22 Charlottenburg	322 766	983	1 028	1 057	1 072	105	108	109
23 Cöpenick	32 583	862	950	991	1 030	110	115	119
24 Friedrichshagen	14 844	956	922	1 111	1 037	96	116	108
25 Neukölln	(4) 275 604	957	932	1 004	1 023	97	105	107
26 Spandau	95 474	990	971	1 043	1 068	98	105	108
27 Zehlendorf	20 557	938	973	1 104	1 144	104	118	122
Reg.-Bez. Potsdam								
1 Bernau	9 204	869	996	1 047	1 085	115	120	125
2 Brandenburg a. H.	52 972	865	914	990	1 050	106	114	121
3 Eberswalde	26 786	908	927	1 028	1 015	102	113	112
4 Freienwalde a. O.	8 323	903	918	978	1 024	102	108	113
5 Jüterbog	7 891	843	887	958	980	105	114	116
6 *Lehnin	2 396	922	996	985	1 095	108	107	119
7 Luckenwalde	22 742	844	987	977	989	117	116	117
8 Nauen	8 734	981	1 019	1 029	1 073	104	105	109
9 Neuruppin	17 215	860	855	907	964	99	105	112
10 *Nowawes	25 582	801	946	1 009	1 010	118	126	126
11 Oranienburg	12 777	941	989	976	1 002	105	104	106
12 Perleberg	9 551	839	889	915	970	106	109	116
13 Potsdam	58 397	979	1 048	1 026	1 081	107	105	110
14 Prenzlau	19 650	787	854	923	921	109	117	117
15 Rathenow	24 885	896	928	959	1 004	104	107	112
16 Wittenberge	24 257	875	928	978	968	106	112	111
Reg.-Bez. Frankfurt								
1 Arnswalde	9 799	806	919	946	970	114	117	120
2 Cottbus	48 046	839	881	957	1 026	105	114	122
3 Cüstrin	18 522	984	1 008	1 019	1 065	102	104	108
4 Finsterwalde	12 754	1008	1 037	1 106	1 160	103	110	115
5 Forst (Lausitz)	32 216	908	910	993	1 129	100	109	124
6 Frankfurt a. O.	65 055	874	898	997	991	103	114	113
7 Fürstenberg a. O.	6 319	856	928	896	976	108	105	114
8 Fürstenwalde a. Sp.	21 522	843	888	928	992	105	110	118
9 Guben	37 987	934	842	997	1 003	90	107	107
10 Landsberg a. W.	39 752	842	914	957	962	109	114	114
11 Senftenberg	(* 13 346	1011	1 031	1 093	1 067	102	108	106
12 Sommerfeld	10 700	886	995	991	1 008	112	112	114
13 Sorau (Nied.-Lausitz)	15 651	798	965	1 015	1 051	121	127	132
14 Spremberg	10 363	968	949	1 030	1 028	98	106	106
Reg.-Bez. Stettin								
1 Altdamm	8 390	898	886	936	962	99	104	107
2 Anklam	14 355	829	859	974	958	104	117	116
3 Demmin	12 001	969	917	947	979	95	98	101
4 Gollnow	10 155	971	813	870	896	103	110	113
5 Pasewalk	11 041	960	906	964	977	94	100	102
6 Stargard i. Pom.	28 629	903	955	1 002	1 007	106	111	112
7 Stettin	232 726	986	947	1 044	1 040	96	106	105
8 Swinemünde	15 587	834	959	1 010	1 015	115	121	122
Reg.-Bez. Köslin								
1 Belgard	10 406	832	978	1 045	1 061	118	126	128
2 Bublitz	5 112	874	983	969	981	112	111	112
3 Kolberg	29 021	1046	1 013	1 085	1 100	97	104	105
4 Köslin	27 005	916	1 036	958	986	113	105	108
5 Lauenburg i. Pom.	14 777	840	897	964	1 051	107	115	125
6 Neustettin	13 264	877	958	984	1 024	109	112	117
7 Schlawe	7 063	877	858	977	1 007	98	111	115
8 Stolp i. Pom.	37 603	963	1 054	1 034	1 047	109	107	109
Reg.-Bez. Stralsund								
1 Barth	6 898	783	856	907	913	109	116	117
2 Greifswald	34 374	933	862	978	1 004	92	105	108
3 Stralsund	36 396	815	886	917	941	109	113	115
Verw.-Bez. Westpreußen-Posen								
1 Deutsch-Krone	8 191	800	938	948	1 042	117	119	130
2 Fraustadt	7 297	815	904	1 013	1 047	111	124	128
3 Meseritz	6 334	878	868	922	915	99	105	104
4 Schneidemühl	32 569	843	989	965	1 001	117	114	119

[1]) ab 1. 5. 21 mit Friedrichsfelde. — [2]) ab 1. 4. 21 mit Friedenau. — [3]) ab 1. 7. 21 mit Lankwitz und Lichterfelde. — [4]) ab 1. 4. 21 mit Britz. — [5]) nach dem Gebietsumfang vom 1. Juli 1920.

Figure A3: Local inflation in the 1920s

This figure shows the locations of the towns for which we have historical inflation data (white dots) as well as historical inflation for each zip code in contemporary Germany. We assign zip codes to the closest town for which we have historical inflation. Darker shading of a zip code reflects higher cumulative inflation between January 1920 and December 1924.

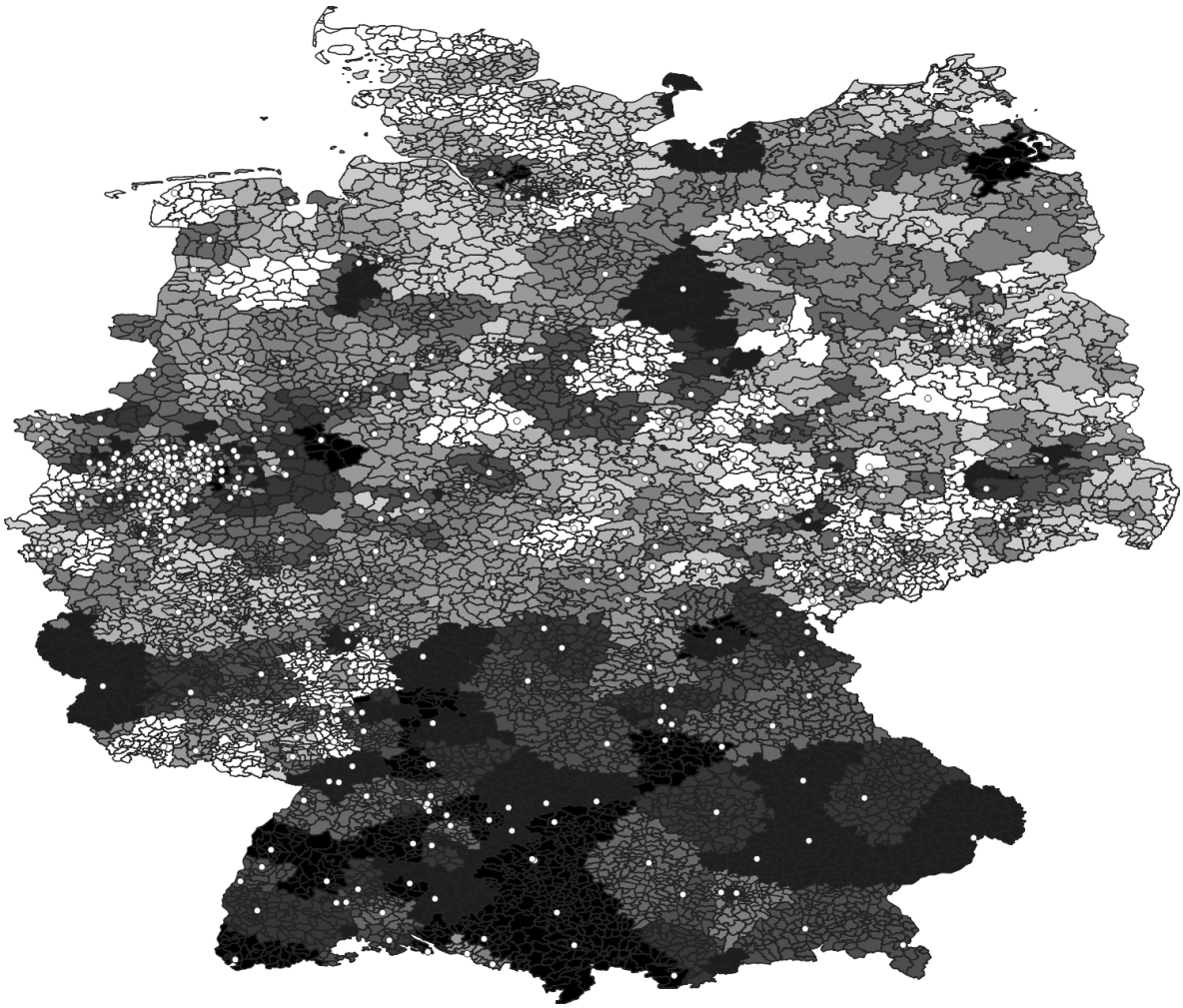


Figure A4: Local inflation in Poland in the 1920s

This figure shows the locations of the towns for which we have historical inflation data (white dots) as well as historical inflation for each zip code in contemporary Poland. We assign zip codes to the closest town for which we have historical inflation. Blurred zip codes did not belong to Germany in the 1920s. Darker shading of a zip code reflects higher cumulative inflation between January 1920 and December 1924.

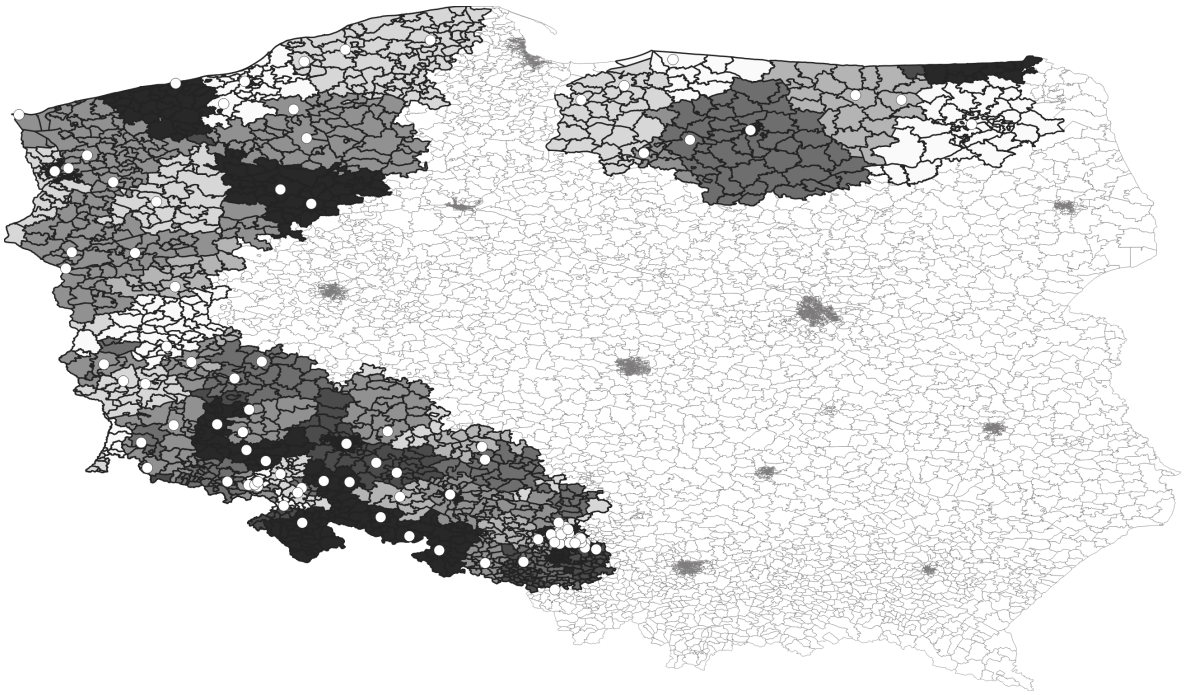


Table A1: Determinants of local inflation in the 1920s

This table presents the results from OLS regressions. The dependent variable is the inverse hyperbolic sine of the realized rate of inflation at the town-month level. The variable *Log(population)* is the natural logarithm of the population of a town in 1919. The variable *Unemployment rate* is the local unemployment rate. The variable *Occupied (d)* is a dummy variable that equals one for towns occupied by the France or Belgium army, and zero otherwise. *German Central Bank (d)* is a dummy variable that equals one for towns with a branch of the *Reichsbank*, and zero otherwise. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are double-clustered at the town and month level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Log(inflation)				
	(1)	(2)	(3)	(4)	(5)
Log(population)	0.051*				0.022
	(1.97)				(1.54)
Unemployment rate		-2.706**			-2.634*
		(-2.17)			(-1.97)
Occupied (d)			0.078**		0.083**
			(2.50)		(2.46)
German Central Bank (d)				0.110*	0.054
				(1.88)	(1.40)
Adj. R^2	0.003	0.001	0.001	0.003	0.004
N	24,976	20,259	24,976	24,976	20,259

Table A2: Local inflation in the 1920s and today's inflation expectations with different clustering of standard errors

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the zip code level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, and dummy variables for urban and rural areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the GfK Consumer Climate MAXX survey. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors clustered at the county level are reported in parentheses. Standard errors clustered at the state level are reported in square brackets. Standard errors after applying the spatial correction proposed by Conley (1999) for six different thresholds (25 km, 50 km, 75 km, 100 km, 125 km, and 150 km) are reported in curly brackets. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Log(inflation)$_{1920-1924}$	3.631		2.011	
	(1.183)***		(1.254)	
	[1.010]***		[1.306]	
	{0.317}$_{25}$***		{0.488}$_{25}$***	
	{0.325}$_{50}$***		{0.506}$_{50}$***	
	{0.321}$_{75}$***		{0.508}$_{75}$***	
	{0.328}$_{100}$***		{0.493}$_{100}$***	
	{0.324}$_{125}$***		{0.489}$_{125}$***	
	{0.327}$_{150}$***		{0.502}$_{150}$***	
Inflation decile$_{1920-1924}$		0.213		0.123
		(0.0634)***		(0.0606)**
		[0.0532]***		[0.0680]*
		{0.0167}$_{25}$***		{0.0259}$_{25}$***
		{0.0173}$_{50}$***		{0.0266}$_{50}$***
		{0.0171}$_{75}$***		{0.0268}$_{75}$***
		{0.0172}$_{100}$***		{0.0263}$_{100}$***
		{0.0163}$_{125}$***		{0.0261}$_{125}$***
		{0.0160}$_{150}$***		{0.0266}$_{150}$***
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	No	No
County-time fixed effects	No	No	Yes	Yes
Adj. R^2	0.076	0.079	0.332	0.332
N	30,899	30,899	30,899	30,899

Table A3: Local inflation in the 1920s and today's realized inflation by period

This table presents the results from OLS regressions with state-time fixed effects. The dependent variable is the realized rate of inflation at the outlet-month level. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Historical local inflation is computed at the community level. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the data underlying the German CPI sourced from the Federal Statistical Office and the Statistical Offices of the Federal States of Germany. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Realized inflation rate (%)							
	2005-2009		2010-2014		2015-2019		2020-2023	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\text{Log(inflation)}_{1920-1924}$	-0.047		-0.053		-0.016		-0.041	
	(-0.73)		(-1.16)		(-0.43)		(-0.71)	
$\text{Inflation decile}_{1920-1924}$		-0.001		-0.003		-0.001		-0.004
		(-0.22)		(-1.18)		(-0.75)		(-1.35)
Historical controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.010	0.010	0.009	0.009	0.008	0.008	0.016	0.016
N	1,616,672	1,616,672	2,015,007	2,015,007	2,264,258	2,264,258	1,904,754	1,904,754

Table A4: Local inflation in the 1920s and today's realized inflation using REWE data

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the realized rate of inflation at the supermarket-week level. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Historical local inflation is computed at the zip code level. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on data from REWE, Germany's second-largest supermarket chain. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Realized inflation rate (%)	
	(1)	(2)
$\text{Log(inflation)}_{1920-1924}$	0.044	
	(0.51)	
$\text{Inflation decile}_{1920-1924}$		0.002
		(0.46)
Historical controls	Yes	Yes
State-time fixed effects	Yes	Yes
Adj. R^2	0.858	0.858
N	2,233	2,233

Table A5: Local inflation in the 1920s, today's realized inflation, and today's inflation expectations

This table presents the results from OLS regressions with interacted location and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. The variable *Realized inflation rate* is the monthly local realized rate of inflation. Local inflation is computed at the zip code level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, and dummy variables for urban and rural areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the GfK Consumer Climate MAXX survey. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Log(inflation)$_{1920-1924}$	3.845***		2.592**	
	(3.14)		(2.29)	
Inflation decile$_{1920-1924}$		0.205***		0.143**
		(3.10)		(2.57)
Realized inflation rate	0.067	0.068	0.037	0.041
	(0.62)	(0.64)	(0.20)	(0.22)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	No	No
County-time fixed effects	No	No	Yes	Yes
Adj. R^2	0.110	0.111	0.305	0.305
N	20,565	20,565	20,565	20,565

Table A6: Local inflation in the 1920s and today's other expectations

This table presents the results from OLS regressions with location fixed effects. The dependent variable is either the expected rate of inflation for real estate over the next 12 months (Columns 1 and 2), the expected interest rate over the next 12 months (Columns 3 and 4), or the expected stock return over the next 12 months (Columns 5 and 6). The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the county level. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. In Panel A, the sample is based on *Deutsche Bundesbank's* PHF. In Panel B, the sample is based on *Deutsche Bundesbank*'s BOP-HH. Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: Bundesbank data (PHF)

	Expected inflation rate for real estate (%)		Expected interest rate (%)		Expected stock return (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Log(inflation)$_{1920-1924}$	-0.347		-0.121		-0.664	
	(-0.21)		(-0.72)		(-0.41)	
Inflation decile$_{1920-1924}$		-0.037		-0.007		-0.041
		(-0.48)		(-0.95)		(-0.55)
Household controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.098	0.098	0.043	0.043	0.006	0.006
N	3,174	3,174	3,051	3,051	2,459	2,459

Panel B: Bundesbank data (BOP-HH)

	Expected inflation rate for real estate (%)		Expected interest rate (%)		Expected stock return (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Log(inflation)$_{1920-1924}$	-0.179		0.028		1.072	
	(-0.35)		(0.34)		(0.63)	
Inflation decile$_{1920-1924}$		-0.015		-0.000		0.004
		(-0.65)		(-0.03)		(0.05)
Household controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.060	0.060	0.024	0.024	0.010	0.010
N	28,651	28,651	17,277	17,277	2,759	2,759

Table A7: Local inflation in the 1920s, respondent characteristics, and today's inflation expectations

This table presents the results from OLS regressions with interacted state and time fixed effects. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the zip code level. *Female (d)* is a dummy variable that equals one for female respondents and zero for male respondents. The variable *Age* captures the age of the respondent. *University (d)* is a dummy variable that equals one for respondents who hold a university degree, and zero otherwise. *Rural area (d)* is a dummy variable that equals one for respondents who live in rural areas, and zero otherwise. Household controls include age squared, additional dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, and a dummy variable for urban areas. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on the GfK Consumer Climate MAXX survey. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)			
	(1)	(2)	(3)	(4)
Inflation decile$_{1920-1924}$	0.188***	0.231**	0.225***	0.166**
	(3.01)	(2.29)	(3.49)	(2.48)
Female (d)	0.085	0.304***	0.303***	0.310***
	(0.62)	(4.24)	(4.24)	(4.34)
Age	-0.021	-0.020	-0.021	-0.019
	(-1.12)	(-1.04)	(-1.11)	(-1.04)
University (d)	-0.478**	-0.475**	0.044	-0.471**
	(-2.57)	(-2.59)	(0.14)	(-2.52)
Rural area (d)	0.254	0.250	0.243	-0.513
	(0.86)	(0.85)	(0.83)	(-1.23)
Inflation decile × Female (d)	0.045			
	(1.64)			
Inflation decile × Age		-0.000		
		(-0.27)		
Inflation decile × University (d)			-0.116***	
			(-2.74)	
Inflation decile × Rural area (d)				0.142*
				(1.78)
Household controls	Yes	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes	Yes
State-time fixed effects	Yes	Yes	Yes	Yes
Adj. R^2	0.079	0.079	0.079	0.080
N	30,899	30,899	30,899	30,899

Table A8: Local inflation in the 1920s and today's newspaper coverage of inflation

This table presents the results from OLS regressions. The dependent variable is the natural logarithm of the number of articles on inflation published in a newspaper between August 2018 and July 2021. The variable *Log(inflation)*$_{1920\text{-}1924}$ is the natural logarithm of cumulative local inflation between January 1920 and December 1924. The variable *Inflation decile*$_{1920\text{-}1924}$ is the decile of cumulative local inflation between January 1920 and December 1924. Local inflation is computed at the zip code level. Newspaper controls include the natural logarithm of the number of articles published in a newspaper between August 2018 and July 2021 and the fraction of negative words across articles. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on data from Factiva. Appendix A provides detailed descriptions of all variables used throughout the study. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Log(# articles on inflation)	
	(1)	(2)
$\text{Log(inflation)}_{1920-1924}$	0.997***	
	(3.74)	
$\text{Inflation decile}_{1920-1924}$		0.057***
		(3.59)
Newspaper controls	Yes	Yes
Historical controls	Yes	Yes
Adj. R^2	0.942	0.943
N	99	99

Table A9: Current inflation, changes in VAT, and today's inflation expectations

This table presents the results from OLS regressions. The dependent variable is the expected rate of inflation over the next 12 months. The variable *Current inflation (%)* is the year-over-year national realized rate of inflation in a certain month. The variable *Post VAT decrease (d)* equals one after the VAT decrease (July 1, 2020, onward), and zero otherwise. The variable *Post VAT increase (d)* equals one after the VAT increase (January 1, 2021, onward), and zero otherwise. Household controls include a dummy variable for gender, age, age squared, dummy variables for educational attainment, dummy variables for marital status, dummy variables for employment status, household income, household wealth, dummy variables for urban and rural areas, and a dummy variable for living in East Germany in 1989. Historical controls include the average local unemployment rate between January 1920 and December 1924, a dummy variable for areas occupied by the French or Belgian army, and a dummy variable for areas with a local branch of the *Reichsbank*. The sample is based on *Deutsche Bundesbank*'s BOP-HH and includes repeated observations. In Column 2 (Column 3), we focus on a 12-month window centered around the VAT decrease (increase) on July 1, 2020 (January 1, 2021). Appendix A provides detailed descriptions of all variables used throughout the study. Appendix B provides an overview of the household controls used. Standard errors are clustered at the county level. t-statistics are provided in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Expected inflation rate (%)		
	(1)	(2)	(3)
Current inflation (%)	0.323***		
	(42.91)		
Post VAT decrease (d)		-0.299***	
		(-3.58)	
Post VAT increase (d)			0.050
			(1.08)
Household controls	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes
Adj. R^2	0.090	0.078	0.061
N	64,099	16,248	28,932