

# Austria One Century Apart: Persistent Effects of Hyperinflation on Inflation Expectations

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## Abstract

Can the memory of past inflation shape how people form expectations about prices today? Using regional inflation data from Austria's 1921-22 hyperinflation linked to quarterly consumer surveys (May 2020-Oct 2024), we document a persistent association between historical inflation exposure and contemporary inflation expectations: individuals from regions more exposed to the historical hyperinflation episode report higher inflation expectations, a century later. We further show that regional newspapers in historically high-inflation areas devote greater attention to inflation, suggesting that local media environments contribute to the intergenerational transmission of inflation attitudes. These findings indicate that the collective memory of major inflation episodes can durably shape expectation formation, with implications for managing heterogeneous regional responses during inflationary episodes.

**Keywords:** *inflation, inflation expectations, long-term persistence*

**JEL classification:** D14, E31, E71, G41, N14

*Especially, if there is a backward-looking component in how firms, households and financial market participants form beliefs, a period of high inflation can persistently alter inflation expectations.*

Philip Lane, Underlying inflation. (March 6, 2023).

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# 1 Introduction

The hyperinflation in Austria during the early 1920s is tied to the legacy of World War I (WWI) and the collapse of the Austro-Hungarian Empire. As reported in Sargent (1982), Austria, reduced to a fraction of its former territory and population, faced severe economic challenges, including trade disruptions, food scarcities, and population migration. The governments of the First Republic of Austria, burdened by reparations and constrained by new national borders, relied heavily on inflationary finance to cover substantial budget deficits - often exceeding 50% of total expenditures. This situation led to rising inflation and a rapid depreciation of the Austrian crown. A turning point came in 1922, when the League of Nations facilitated a reconstruction plan that combined an international loan, strict fiscal reforms, and the creation of an independent central bank prohibited from monetizing government deficits. These measures abruptly stabilized the currency and ended the inflationary spiral.

Fast forward a century later, Austria, like much of the world, experienced a sharp inflation surge in the early 2020s, driven by a confluence of global and domestic factors. The COVID-19 pandemic had disrupted supply chains and shifted consumption patterns, creating shortages of key goods and services. As the economy rebounded in 2021, pent-up demand collided with supply constraints, pushing up prices. This situation was exacerbated by rising energy costs, following the instability triggered by Russia's invasion of Ukraine in early 2022. Austria, heavily reliant on imported energy, faced steep increases in energy bills, which spilled over into other sectors. Fiscal measures introduced to cushion households, including subsidies and price caps, temporarily offset some of the pain but also added to inflationary pressures. By mid-2022, inflation had reached levels not seen in decades, peaking at 11.6% in January 2023 (Figure 1), hence confronting policymakers with the challenge of balancing price stability with stable economic activity.

The inflation crises of the 1920s and the 2020s, though separated by a century, provide a unique lens to study whether large nominal shocks leave persistent "inflation memory" that shapes contemporary beliefs. We exploit regional variation in hyperinflation intensity in the early 1920s and relate it to the household inflation expectations during the 2020s inflation surge.

Two findings emerge. First, individuals residing in regions that experienced higher historical inflation exhibit higher inflation expectations on average: a 1% higher regional inflation rate in the early 1920s is associated with a 0.372% higher expected inflation (conditional on common time effects and individual controls). Point estimates suggest a somewhat larger association during the high-inflation period, though the difference is not statistically significant, in part reflecting the limited sample size of the low-inflation subperiod. Second, we document that regions with higher historical inflation exhibit greater exposure to inflation-related coverage in regional newspapers during 2020-2024, suggesting that local media environments may serve as a channel for the intergenerational transmission of inflation attitudes.

Our exercise is closely related to, and motivated by, Braggion, von Meyerinck, Schaub, and Weber (2024), who implement a conceptually similar design using highly granular German data (633 geographic units) and extend the analysis to Poland. We contribute an external-validity test in a different institutional and data environment (Austria, 10 cities). Consistent with Braggion, von Meyerinck, Schaub, and Weber (2024), we

find that regions with higher historical inflation exhibit higher baseline inflation expectations.<sup>1</sup>

Section 2 presents the historical and contemporary data. Section 3 introduces the econometric framework and discusses the results. Section 4 documents how local newspapers can propagate historical inflation and influence contemporaneous inflation perception and expectation. Section 5 discusses a behavioral interpretation of results and concludes with policy implications.

## 2 Data

**Historical Inflation Data.** The Statistical Handbook for the Republic of Austria (Federal Statistical Office, 1923) provides city-level prices for a wide range of consumption goods in Austria’s ten largest cities over 1914–1922.<sup>2</sup> The price dynamics illustrate the severity of the hyperinflation for the cost of living: flour rose from 0.48 crowns (July 1914) to 7,456 (Dec. 1922), and bread from 0.39 to 5,270. Other staples increased similarly (rice 7,550; beans 6,095; potatoes 863.7), while animal products saw the most dramatic increases (eggs 0.08 to 2,165; butter 2.95 to 53,900). Fuels also surged (charcoal 0.03 to 767.1; wood 0.02 to 438.6).

Hence, while magnitudes varied, prices increased exponentially across all product groups, severely altering consumption costs and the structure of relative prices. Importantly, price dynamics differed across Austrian cities. Table 1 reports the local Retail Price Index (RPI), computed from the evolution of staple goods.

Table 1: Historical Retail Price Index (RPI)

	Jul 1914	Jan 1921	Jul 21	Dec 1921	Jan 1922	Apr 1922	Jul 1922	Dec 1922
Vienna	0.96	100	116.35	633.89	740.73	1115.54	3424.09	11229.35
Sankt Pölten	1.43	100	160.24	869.99	1105.88	1556.24	4974.15	15818.97
Wiener Neustadt	1.00	100	118.70	548.58	923.00	1245.77	3914.15	12314.19
Linz	1.77	100	160.80	995.53	1391.32	2080.18	6661.21	20672.24
Steyr	1.91	100	154.06	1038.20	1264.15	1842.63	5630.50	19513.19
Salzburg	1.67	100	146.63	916.84	1187.45	1720.00	5750.19	18479.26
Graz	1.45	100	148.57	965.90	1289.54	1700.55	5011.56	17839.07
Klagenfurt	1.81	100	164.15	963.02	1345.56	1987.53	9475.20	19754.84
Innsbruck	1.43	100	153.76	830.79	967.92	1456.76	5507.18	14610.18
Bregenz	1.46	100	119.84	544.22	701.15	1162.96	5252.45	14144.67
RPI reported in Sargent (1982)	-	100	143	942	1142	1619	4830	17409

**Notes.** The reported Retail Price Index (RPI) is calculated using basket prices constructed from the weights assigned to each retail product, based on the Austrian Statistical Handbook (1923), and normalized to January 1921. The final row presents the RPI reported by Sargent (1982) as a point of comparison.

To capture the whole inflationary period that started with WWI, historical inflation in city  $j$  used for

<sup>1</sup>Related evidence that individual or regional inflation experiences shape beliefs and preferences is provided by Ehrmann and Tzamourani (2012) and Malmendier and Nagel (2016). Cavallo, Cruces, and Perez-Truglia (2017) show that households in historically high-inflation environments tend to be better informed about inflation. See also Link, Peichl, Pfäuti, Roth, and Wohlfart (2023) on selective attention and recall.

<sup>2</sup>Figure 4 in the Appendix provides an excerpt from the Statistical Handbook.

the econometric analysis is computed as follows:

$$\pi_j = \frac{\text{RPI}_{j,\text{dec } 1922} - \text{RPI}_{j,\text{jul } 1914}}{\text{RPI}_{j,\text{jul } 1914}}$$

The inflation rates resulting from this computation range from 968,016.8% in Bregenz to 1,234,733.0% in Wiener Neustadt between July 1914 and December 1922.

**Contemporaneous Data on Inflation Perception and Expectation.** The European Commission Directorate General Economic and Financial Affairs (DG-ECFIN) conducts quarterly consumer surveys, reporting individual geographic and socio-economic characteristics. The survey includes questions about households' financial situation, perceptions of Austria's economic outlook, views on inflation and unemployment, and individual perspective on major economic decisions. Of particular interest are the reported inflation expectation over the upcoming 12 months.<sup>3</sup> Our analysis for Austria relies on the quarterly survey data conducted from May 2020 to October 2024.

Figure 1 reports the average evolution of inflation, perceived inflation and inflation expectation for Austria over this period. The time period can be split into a low-inflation period (from May 2020 to April 2021) and a high inflation period (from May 2021 to August 2024), where May 2021 is the first month in which inflation in Austria is above the European Central Bank target of 2%.<sup>4</sup> Throughout 2024, inflation decreased steadily, running at an annualized rate of 4.3% in January to a level below the target in September. Since then, inflation has remained around or just below the target of 2%.

Households' perceived and expected inflation consistently exceed actual inflation over the period. Perceptions and expectations of inflation rose in parallel and at a similar pace over the period considered. While actual inflation peaked at 11.6% in January 2023, average inflation expectations reached the highest point earlier, in July 2022, at 16.73%.

These aggregate time-series patterns mask substantial cross-city heterogeneity in inflation expectations. Figure 2 illustrates this variation by relating city-level average inflation expectations to historical inflation exposure. For instance, Sankt Pölten exhibits the highest average inflation expectation over the period, at 13.34%, whereas Salzburg records the lowest, at 10.55%.

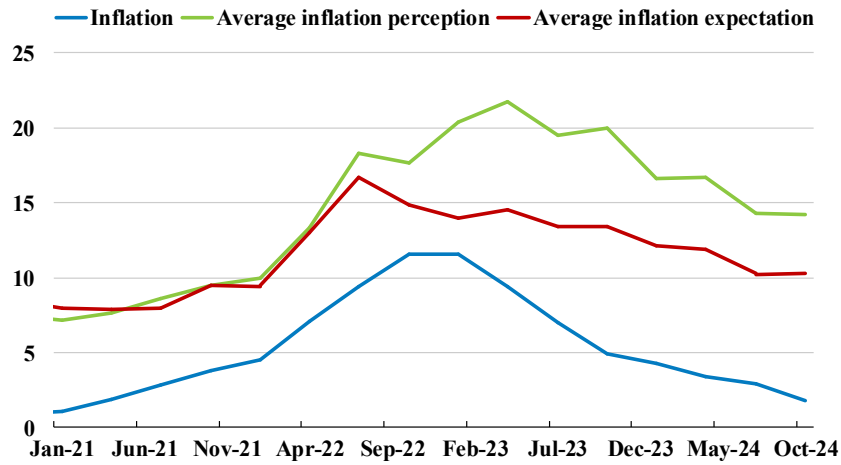
The scatter plot reveals a positive raw correlation: cities that experienced higher inflation in the early 1920s also tend to report higher inflation expectations today. While purely descriptive, this relationship motivates the econometric analysis below by suggesting that historical inflation exposure may be related to contemporary expectation formation.

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<sup>3</sup>Especially, questions 5 and 6 of the survey read: "How do you think that consumer prices have developed over the last 12 months?" and "By comparison with the past 12 months, how do you expect that consumer prices will develop in the next 12 months?"

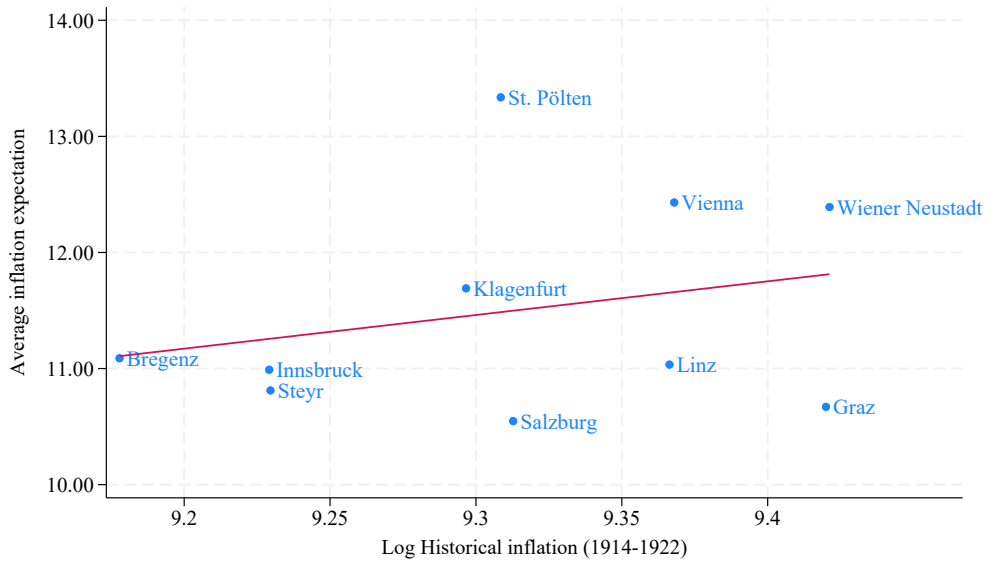
<sup>4</sup>The October 2024 wave is excluded from both subperiods, as national inflation had returned below the ECB target of 2% (1.8%) by then, leaving 655 observations unassigned. There is a total of 21 surveys for the whole period: 3 for the low inflation and 17 for the high inflation, and 1 unassigned (October 2024).

Figure 1: Average inflation, inflation perception and inflation expectations



**Notes.** Average inflation perception and average inflation expectation are computed from the Consumer Survey Data. Monthly inflation is the annualised Eurostat harmonised index of consumer prices (HICP).

Figure 2: Raw correlation: inflation expectation vs. historical inflation



**Notes.** Each point corresponds to one of Austria's ten largest cities. The y-axis reports the city-level average of 12-month-ahead inflation expectations from the European Commission consumer survey, averaged across all available waves (May 2020–October 2024). The x-axis reports log historical inflation during Austria's hyperinflation episode (1914–1922), constructed from the city-level Retail Price Index (RPI) in Table 1.

### 3 Econometric Analysis

**Econometric Model.** Our empirical specification for analyzing how regional historical inflation is related to contemporaneous individual inflation expectations is the following:

$$\log(\pi_{ijt}^e) = c + \alpha \log(\pi_j) + \delta X_{ijt} + \lambda_t + \varepsilon_{ijt},$$

where the dependent variable  $\pi_{ijt}^e$  denotes inflation expectation of individual  $i$  in location  $j \in \{1 \dots 10\}$  at time  $t$ , with  $t$  ranging from May 2020 to October 2024.  $\pi_j$  denotes historical inflation in location  $j$ . The vector  $X_{ijt}$  includes individual-level controls.  $\lambda_t$  reflects time-fixed effects and  $\varepsilon_{ijt}$  is an idiosyncratic error term. Historical data are linked to respondents using their postal code. Socio-economic controls collected through the survey include gender of respondent, age, number of people in the household, monthly income, highest level of education attained, and current employment status. Standard errors are clustered at the city level  $j$ .<sup>5</sup>

This specification allow us to assess the correlation between historical inflation  $\pi_j$  and individual inflation expectations, conditional on common-varying factors absorbed by  $\lambda_t$  and individual socio-economic characteristics  $X_{ijt}$ . The coefficient of interest  $\alpha$  measures the elasticity of inflation expectations to historical local inflation, conditional on these controls.

Table 2 reports our regression estimates of the relationship between historical inflation and contemporary inflation expectations. The specifications build progressively. Column (1) presents the univariate specification, establishing a positive raw correlation between log historical inflation and log inflation expectations. Column (2) controls for monthly national inflation without time fixed effects, showing that the association persists when accounting for the macroeconomic environment. Column (3) presents our main specification, where aggregate time-varying factors, including national inflation are captured by time-fixed effects. Hence, the estimate of  $\alpha$  comes from cross-sectional variation across cities exposed to common national conditions. Columns (4) and (5) provide estimates separately for the low-inflation period (May 2020–April 2021) and the high-inflation period (May 2021–August 2024)<sup>6</sup>.

**Results.** Across specifications, the estimated coefficient on log historical inflation,  $\alpha$ , is positive and remarkably stable, indicating that individuals residing in regions that experienced higher historical inflation between 1914 and 1922 tend to report higher inflation expectations on average. Interpreting the main specification (column 3), a 1% higher historical inflation is associated with a 0.372% higher inflation expectation, conditional on time fixed effects and individual socio-economic controls. When splitting the sample into the low- and high-inflation subperiods, the coefficient remains positive in both periods (0.293 in column (4) and 0.456 in column (5)). Point estimates are somewhat larger during the high-inflation period, but the

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<sup>5</sup>Clustering standard errors at the city level  $j$  is appropriate, as key explanatory variables (historical inflation  $\pi_j$ ) vary only at this level. This accounts for intra-city correlation in the error term and avoids underestimating standard errors due to within-cluster dependence. However, clustering at a relatively coarse level with few units of observation naturally reduces statistical power, which results in relatively large confidence intervals. As a consequence, emphasis should also be placed on the magnitude and sign of the estimated coefficients.

<sup>6</sup>Table 3 in the Appendix reports the estimated coefficients for all socio-economic control variables.

Table 2: Regression results

	(1)	(2)	(3)	(4)	(5)
	<b>Log(Inflation expectations)</b>				
	<i>Full sample</i>	<i>Full sample</i>	<i>Full sample</i>	<i>Low inflation</i>	<i>High inflation</i>
	<i>May 20 - Oct 24</i>	<i>May 20 - Oct 24</i>	<i>May 20 - Oct 24</i>	<i>May 20 - Apr 21</i>	<i>May 21 - Aug 24</i>
Log(Historical inflation)	0.348*	0.319*	0.372*	0.293	0.456*
	(0.184)	(0.161)	(0.199)	(0.210)	(0.245)
Monthly national inflation		0.0671***			
		(0.00169)			
Gender			0.0860***	0.200***	0.0645**
			(0.0181)	(0.0507)	(0.0236)
Age			0.0123*	0.00664	0.00987
			(0.00609)	(0.00834)	(0.00684)
Age <sup>2</sup>			-0.000187**	-0.0000709	-0.000169**
			(0.0000679)	(0.0000941)	(0.0000698)
Monthly income	-	-	✓	✓	✓
Household size	-	-	✓	✓	✓
Highest education degree	-	-	✓	✓	✓
Current employment status	-	-	✓	✓	✓
Time fixed effects	-	-	✓	✓	✓
Constant	-2.859	-2.823	-3.217	-2.598	-4.296
	(2.555)	(2.241)	(2.819)	(3.056)	(3.515)
Observations	14723	14723	14723	1691	12377
R <sup>2</sup>	0.000425	0.0449	0.113	0.0865	0.107

**Notes.** Standard errors in parentheses \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Socio-economic controls indicated with a ✓(monthly income, household size, education, and employment status) enter as categorical variables (sets of dummies). To preserve expositional clarity, their coefficients are omitted. The October 2024 wave is excluded from both subperiods, as national inflation had returned below the ECB target of 2% (1.8%) by then, leaving 655 observations unassigned.

difference is not statistically significant.<sup>7</sup>

The implied magnitudes are economically meaningful. Using the elasticity estimated for the high-inflation period (column (5)), moving from the city with the lowest historical inflation to the city with the highest historical inflation implies an increase in predicted inflation expectations of about 11.7%.<sup>8</sup> This magnitude is in line with the descriptive gaps in average expectations across cities documented in Figure 2.

Note that regarding national inflation, column (2) shows a strong positive correlation between monthly national inflation and inflation expectations. Once time fixed effects are included (columns (3)-(5)), national inflation is no longer included as regressor, as it varies only over time and is therefore largely absorbed by the time effects. Identification of  $\alpha$  thus comes from cross-sectional differences across cities exposed to common national shocks: individuals face the same national inflation rate in a given month, yet their expectations may differ systematically with their city’s historical inflation exposure.

Importantly, our estimation relies on cross-sectional variation in historical inflation across only ten Austrian cities. This limited granularity constrains the scope of the analysis, and our estimates should therefore be interpreted as correlational. Historical inflation may proxy for persistent regional characteristics that are not observed in the data.<sup>9</sup> Moreover, historical inflation may be correlated with more recent local economic dynamics. While time fixed effects absorb common national shocks, they do not eliminate time-varying, city-specific conditions (e.g. local price dynamics or labor-market developments) that may contribute to heterogeneity in expectations. With the available data, we cannot fully disentangle the role of historical inflation from these potential confounding factors.

Taken together, these results are consistent with the view that historical inflation leaves a persistent imprint on expectation formation: individuals in regions that experienced higher inflation in the past tend to report higher inflation expectations on average, even a century later. These patterns suggest that the collective memory of major inflation episodes can outlast the generations that directly experienced them, durably shaping how individuals form beliefs about prices.

## 4 Regional Press and Economic Attitudes Toward Inflation

In this section, we explore how regional cultural institutions may transmit beliefs and attitudes shaped by historical experiences across generations. We focus on the role of the local press in perpetuating regional inflation narratives. As emphasized in Goetzmann, Kim, and Shiller (2022), the press influences collective memory and public narratives, affecting how individuals interpret both historical events and current economic developments. There is also empirical evidence that consumers’ inflation expectations respond to media coverage of inflation (Lamla and Lein (2014)).

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<sup>7</sup>The coefficient in the low-inflation subperiod is not statistically significant, in part reflecting the substantially smaller sample size (1,691 observations versus 12,377 in the high-inflation period). A Chow test (Table 4 in the Appendix) yields an interaction coefficient of 0.153 ( $p=0.579$ ), confirming that the difference across subperiods is not statistically significant.

<sup>8</sup>The highest historical inflation in our sample is 1,234,733.0% and the lowest is 968,016.8%, so the maximum is about 27.6% higher than the minimum. In a log-log specification, this translates into a predicted gap in expectations of roughly  $0.456 \times \ln(1.276) \approx 0.111$  log points, i.e. about 11.7% in levels during the high-inflation period (column (5)). Using the full-sample estimate  $\alpha = 0.372$  (column (3)) implies a gap of about 9.5%.

<sup>9</sup>For instance, cities that experienced higher inflation during 1914-1922 may also have differed systematically in their economic structure, financial development, or political and institutional conditions-factors that could themselves shape expectation formation today. In that case, the estimated coefficient would partly reflect these omitted characteristics

**Media Exposure Indices.** Newspaper markets in Austria are regionally segmented: readership is strongly concentrated in the newspaper’s region of origin. For example, the *Salzburger Nachrichten* has a stronger readership in Salzburg, while the *Vorarlberger Tageszeitung* is primarily consumed in Bregenz. Using annual readership statistics from the *Media Analysis* (AMA)<sup>10</sup> and article-level data from the GBI GENIOS database<sup>11</sup>, we construct state-level measures of exposure to inflation-related news that combines (i) regional media consumption patterns and (ii) newspaper-specific coverage intensity between 1 January 2020 and 31 December 2024. The geographical concentration of media diffusion and consumption implies that even nationally relevant topics, such as inflation, can be filtered through regionally distinct media coverage.

For each state  $s$  and newspaper  $n$ , let  $P_{s,n}$  denote the average share of the population reading newspaper  $n$  over 2020–2024. Let  $A_{n,t,i}$  denote the number of articles published by newspaper  $n$  in year  $t$  that mention inflation, and  $A_{n,t,\cdot}$  the total number of articles published in that year. We construct two complementary exposure measures:

$$ME_s^{\text{level}} = \sum_{n \in \mathcal{N}} P_{s,n} \left( \frac{1}{T} \sum_{t=2020}^{2024} A_{n,t,i} \right), \quad ME_s^{\text{share}} = \sum_{n \in \mathcal{N}} P_{s,n} \left( \frac{\sum_{t=2020}^{2024} A_{n,t,i}}{\sum_{t=2020}^{2024} A_{n,t,\cdot}} \right), \quad (4.1)$$

where  $T = 5$  denotes the number of years in the sample period.

The first index,  $ME_s^{\text{level}}$ , measures the readership-weighted number of inflation-related articles available to residents of state  $s$ . It can be interpreted as the expected volume of inflation-related content accessible to the average resident, accounting for both newspaper readership shares and the absolute number of inflation articles published.

The second index,  $ME_s^{\text{share}}$ , normalizes inflation coverage by total newspaper output and therefore captures editorial salience rather than volume. Because larger newspapers mechanically publish more articles on all topics,  $ME_s^{\text{level}}$  may partly reflect newspaper size. By contrast,  $ME_s^{\text{share}}$  measures the readership-weighted share of newspaper content devoted to inflation and isolates relative topic emphasis.

Substantial heterogeneity emerges across states. Using the volume-based measure, exposure ranges from approximately 126 in Bregenz to 900 in Niederösterreich (where St. Pölten and Wiener Neustadt are located), implying that residents in Niederösterreich were exposed to roughly seven times more inflation-related articles than residents in Bregenz over the sample period. This variation reflects both higher readership of large national newspapers and stronger regional newspaper penetration.

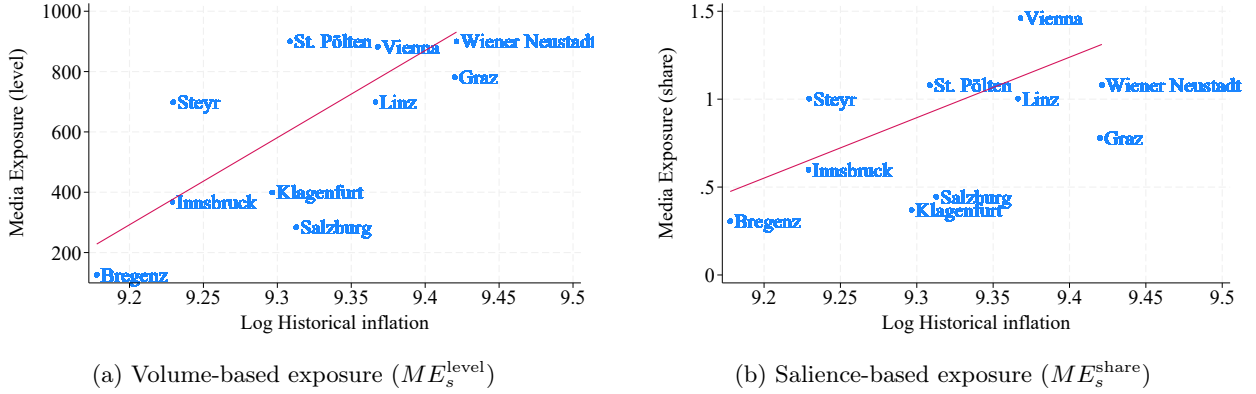
When exposure is measured in shares, the dispersion remains sizeable but is less extreme: inflation-related content accounts for about 0.31% of total newspaper exposure in Bregenz compared to 1.46% in Vienna. Hence, even after controlling for newspaper size, the relative salience of inflation differs by a factor of almost five across regions.

Importantly, differences between  $ME_s^{\text{level}}$  and  $ME_s^{\text{share}}$  are informative. States with high exposure in levels but more moderate exposure in shares are characterized by newspapers that publish large volumes of

<sup>10</sup>Source: <https://www.media-analyse.at/p/2>. Readership statistics are available at the state (*Bundesland*) level; we therefore construct media exposure by state and assign each city the exposure measure of its state.

<sup>11</sup>Article counts were retrieved from the GBI GENIOS database. The 11 newspapers are *Der Standard*, *Die Presse*, *Kronen Zeitung*, *Kurier*, *Kleine Zeitung*, *Oberösterreichische Nachrichten*, *Salzburger Nachrichten*, *Tiroler Tageszeitung*, *Neue Vorarlberger Tageszeitung*, *Vorarlberger Tageszeitung*, and *Niederösterreichische Nachrichten*. The selection of newspapers was based on data availability in both the Working Group Media Analysis and GBI GENIOS databases.

Figure 3: Media exposure and historical inflation



**Notes.** Each point corresponds to a state. Panel (a) plots the volume-based exposure index  $ME_s^{\text{level}}$  (readership-weighted counts of inflation-related articles), while Panel (b) plots the salience-based index  $ME_s^{\text{share}}$  (readership-weighted share of articles devoted to inflation). The red line shows fitted values from regressing each index on historical inflation (1914–1922). Data sources: GBI GENIOS database (article counts, 2020–2024); AMA-*Media Analysis* reports (readership shares, 2020–2024); Austrian Statistical Handbook (historical prices); authors’ calculations.

content overall, but do not disproportionately emphasize inflation. Conversely, high values in both measures indicate both high media volume and strong editorial focus on inflation.

Figure 3 shows a positive cross-sectional correlation between historical inflation (1914–1922) and contemporary media exposure under both measures. States with higher historical inflation tend to exhibit greater inflation-related media exposure today, whether measured in article counts or in topic shares. The relationship is not driven solely by newspaper size, as it persists when exposure is normalized by total printed articles.

While purely descriptive, this pattern suggests that local information environments may contribute to the persistently higher inflation expectations observed in historically high-inflation regions, aligning with prior research on the role of public narratives in economic behavior. The fact that the correlation holds both in levels and when normalizing by total newspaper output is consistent with a role for narrative salience rather than newspaper size alone.

**Relation to the Literature.** Multiple channels may transmit inflation attitudes over time. A first set operates through vertical transmission within families, consistent with a broader literature documenting intergenerational persistence in preferences and attitudes (e.g., Dohmen, Falk, Huffman, and Sunde (2011), Kosse and Pfeiffer (2012), Brenøe and Epper (2022), Campos-Vazquez (2018)). A second set operates through horizontal transmission via collective memory and public narratives. Braggion, von Meyerinck, Schaub, and Weber (2024) emphasize this mechanism using parliamentary speeches and media coverage, showing that representatives from historically high-inflation constituencies talk more about inflation, especially during contemporary inflation spikes. Related work highlights the role of local media in shaping beliefs and expectations through the salience of economic narratives (e.g., Lamla and Lein (2014), Larsen, Thorsrud, and Zhulanova (2020)). Consistent with this view, Barkhausen and Teupe (2025) argue that the link between Germany’s hyperinflation and a strong preference for price stability was not an automatic imprint of lived

experience, but was progressively constructed and reinforced through postwar political discourse and public debate. Taken together, this literature suggests that local information environments and public narratives—including regional media coverage - can contribute to persistent heterogeneity in inflation attitudes.

## 5 Concluding Remarks

This paper documents a persistent association between historical inflation exposure and contemporary inflation expectations: individuals residing in regions that experienced higher inflation during Austria’s 1921–22 hyperinflation tend to report higher inflation expectations on average, even a century later. This section briefly discusses the results through the lens of behavioral mechanisms and highlights their implications for monetary policy and communication.

**Behavioral Interpretation.** Our findings point to a persistent imprint of historical inflation on expectation formation. A natural interpretation is that living in a region with a strong collective memory of inflation durably shapes how individuals form beliefs about prices. The media channel documented in Section 4 supports this view: regional newspapers in historically high-inflation areas devote greater attention to inflation, providing a concrete mechanism through which inflation attitudes may be transmitted across generations. Related evidence suggests that major inflation episodes can leave long-lived imprints on beliefs and attitudes (e.g., Malmendier and Nagel (2016); Goldfayn-Frank and Wohlfart (2020); Salle, Gorodnichenko, and Coibion (2023)). The somewhat larger point estimates observed during the high-inflation period would be consistent with the availability heuristic (Tversky and Kahneman (1974)), whereby historically salient experiences become more accessible when current conditions resemble them, though our data do not allow us to confirm this mechanism.

**Policy Implications.** Our findings suggest that inflation expectations may be more fragile and context-dependent than is often assumed in rational-expectations benchmarks. Because monetary policy and inflation communication are typically implemented at the national or supranational level, a key implication is that common inflation shocks may encounter heterogeneous expectation levels across regions, shaped by historical experience. Such heterogeneity can matter for policy transmission if inflation expectations influence wage- and price-setting or consumption/saving decisions.

The correlation between historical inflation and local media coverage documented in Section 4 also points to a potential role for information environments and public narratives in amplifying regional differences in inflation expectations. This suggests that communication effectiveness may vary across regions, and that periods of elevated inflation may be precisely when targeted, clarifying communication is most valuable for limiting overreactions and supporting expectation anchoring (see also Coibion and Gorodnichenko (2025)). Overall, our results underscore the value of incorporating salience- and memory-based channels into empirical and theoretical work on expectation formation, especially in periods of large inflation shocks when anchoring is most vulnerable.

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# A Appendix

Table 3: Regression results: All coefficients

	(1)	(2)	(3)	(4)	(5)
	<b>Log(Inflation expectations)</b>				
	<i>Full sample</i>	<i>Full sample</i>	<i>Full sample</i>	<i>Low inflation</i>	<i>High inflation</i>
	<i>May 20 - Oct 24</i>	<i>May 20 - Oct 24</i>	<i>May 20 - Oct 24</i>	<i>May 20 - Apr 21</i>	<i>May 21 - Aug 24</i>
Log(Historical inflation)	0.348*	0.319*	0.372*	0.293	0.456*
	(0.184)		(0.199)	(0.210)	(0.245)
Monthly national inflation		0.0671***			
		(0.00169)			
<b>Controls:</b>					
<i>Gender</i>			0.0860***	0.200***	0.0645**
			(0.0181)	(0.0507)	(0.0236)
<i>Age</i>			0.0123*	0.00664	0.00987
			(0.00609)	(0.00834)	(0.00684)
<i>Age</i> <sup>2</sup>			-0.000187**	-0.0000709	-0.000169**
			(0.0000679)	(0.0000941)	(0.0000698)
<i>Monthly income (ref: €750 or less)</i>					
€ 750.- to € 900.-			0.0757	-0.0718	0.0622
			(0.108)	(0.240)	(0.130)
€ 900.- to € 1.050.-			-0.0842	0.128	-0.105
			(0.0921)	(0.220)	(0.166)
€ 1.050.- to € 1.200.-			-0.133	-0.193	-0.166
			(0.125)	(0.310)	(0.179)
€ 1.200.- to € 1.350.-			-0.258**	-0.198	-0.297*
			(0.109)	(0.271)	(0.150)
€ 1.350.- to € 1.500.-			-0.320***	0.0222	-0.330**
			(0.0784)	(0.305)	(0.114)
€ 1.500.- to € 1.650.-			-0.303**	-0.184	-0.344***
			(0.109)	(0.236)	(0.152)
€ 1.650.- to € 1.800.-			-0.405***	0.00468	-0.502***
			(0.0898)	(0.249)	(0.112)
€ 1.800.- to € 1.950.-			-0.263**	-0.194	-0.305*
			(0.113)	(0.209)	(0.152)
€ 1.950.- to € 2.100.-			-0.335***	-0.586**	-0.321*
			(0.0941)	(0.244)	(0.145)
€ 2.100.- to € 2.250.-			-0.331***	-0.103	-0.359***
			(0.0640)	(0.200)	(0.103)
€ 2.250.- to € 2.400.-			-0.301***	-0.0473	-0.352***
			(0.0750)	(0.162)	(0.103)
€ 2.400.- to € 2.700.-			-0.362***	-0.190	-0.417***
			(0.0830)	(0.213)	(0.113)
€ 2.700.- to € 3.000.-			-0.416***	-0.379**	-0.433***
			(0.0808)	(0.148)	(0.126)
€ 3.000.- to € 3.300.-			-0.431***	-0.534**	-0.436***
			(0.0883)	(0.174)	(0.131)
€ 3.300.- to € 3.600.-			-0.425***	-0.397	-0.428***
			(0.0752)	(0.218)	(0.114)
€ 3.600.- to € 3.900.-			-0.423***	-0.584**	-0.408**
			(0.0892)	(0.194)	(0.127)
€ 3.900.- to € 4.200.-			-0.418***	-0.434*	-0.438***
			(0.0803)	(0.220)	(0.121)
€ 4.200.- to € 5.000.-			-0.533***	-0.419	-0.546***
			(0.0820)	(0.275)	(0.132)
€ 5.000.- and more			-0.471***	-0.434	-0.478***
			(0.101)	(0.315)	(0.121)
No data			-0.445***	-0.277	-0.477**
			(0.0907)	(0.203)	(0.153)

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Table 3 continued

	(1)	(2)	(3)	(4)	(5)
	Log(Inflation expectations)				
<b>Household size (ref: 1 person)</b>					
2 people			0.0921*** (0.0260)	0.146 (0.0909)	0.0788** (0.0330)
3 people			0.113*** (0.0274)	0.231* (0.120)	0.0942** (0.0342)
4 people			0.111*** (0.0320)	0.240*** (0.0644)	0.0903* (0.0401)
5 people and more			0.115* (0.0521)	0.226* (0.122)	0.0895 (0.0541)
No data			0.198 (0.148)	0.0761 (0.228)	0.130 (0.191)
<b>Education (ref: no schooling)</b>					
Compulsory school			-0.0808 (0.107)	-0.0433 (0.183)	-0.0414 (0.111)
Intermediate vocational school			-0.0766 (0.0913)	0.0358 (0.155)	-0.0375 (0.0979)
Academic secondary school			-0.252** (0.0925)	-0.216 (0.155)	-0.192 (0.107)
Higher vocational school			-0.257** (0.110)	-0.202 (0.141)	-0.207 (0.136)
Post-secondary vocational college			-0.334*** (0.0912)	-0.338 (0.241)	-0.260** (0.110)
University-related diploma			-0.270** (0.112)	-0.202 (0.195)	-0.216* (0.108)
University			-0.397*** (0.107)	-0.348** (0.133)	-0.354** (0.131)
<b>Employment (ref: Full-time employed)</b>					
Part-time employed			-0.0175 (0.0198)	0.00796 (0.0888)	-0.0120 (0.0264)
Assisting family worker			0.319 (0.179)	0.960*** (0.286)	0.282 (0.203)
Unemployed			0.101** (0.0409)	0.178* (0.0949)	0.0807 (0.0613)
Parental leave			0.220** (0.0831)	0.463* (0.241)	0.206* (0.100)
Retired			0.0154 (0.0540)	0.120 (0.135)	-0.0130 (0.0483)
Survivor's pension			0.0304 (0.103)	-0.110 (0.224)	0.0211 (0.115)
Homemaker / no own income			0.0131 (0.147)	-0.395** (0.158)	0.0677 (0.177)
In vocational training			0.0815 (0.0487)	0.302 (0.183)	0.0345 (0.0603)
School student			-0.0940* (0.0480)	0.0953 (0.168)	-0.139** (0.0506)
University student			-0.173*** (0.0298)	-0.133 (0.155)	-0.199*** (0.0349)
Other			-0.135* (0.0702)	0.181 (0.221)	-0.136 (0.101)
Time-fixed effects	-	-	✓	✓	✓
[1em] Constant	-2.859 (2.555)	-2.823 (2.241)	-3.217 (2.819)	-2.598 (3.056)	-4.296 (3.515)
Observations	14723	14723	14723	1691	12377
R <sup>2</sup>	0.000425	0.0449	0.113	0.0865	0.107

Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 4: Chow test: Equality of coefficients across subperiods

	<b>Log(Inflation expectations)</b>
Log(Historical inflation)	0.318 (0.229)
Log(Historical inflation) $\times$ High-inflation period	0.153 (0.266)
Socio-economic controls	✓
Time fixed effects	✓
Observations	14,068
$R^2$	0.113

**Notes.** This table reports a Chow test for equality of the coefficient on log historical inflation across the low- and high-inflation subperiods. The high-inflation period dummy equals 1 for May 2021-August 2024 and 0 for May 2020-April 2021. The October 2024 wave is excluded. All controls follow column (3) of Table 2. Standard errors clustered at the city level in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Figure 4: Statistical handbook for the Republic of Austria - Excerpt

**Die Kosten der Lebenshaltung im März und April 1923 nach dem Gutachten der paritätischen Kommission.\*)**

Die durch das Gesetz vom 21. Dezember 1921 eingesetzte paritätische Kommission hat in ihrem Gutachten über die monatliche Veränderung in den Kosten der Lebenshaltung festgestellt, daß sich für den Monat März eine Verteuerung von 6% und für den Monat April eine solche von 7% ergibt.

Die den beiden Gutachten zugrunde liegenden Preisansätze sind aus der folgenden Tabelle ersichtlich:

**Preistabelle.**

Bedarfsgegenstand	Wertigkeitszahl	Preis der Mengeneinheit in Kronen <sup>1)</sup>				Indezahlen	
		Juli 1914	Februar	März	April	März	April
			1923			1923 (Juli 1914 = 1)	
<b>I. Ernährung:</b>							
Mehl . . . . .	2	0.44	6.910	6.725	6.575	15.511	14.943
Brot (gemischt) . . . . .	2:21	0.32	5.268	5.234	5.206	16.356	16.269
Reis . . . . .	0.25	0.67	6.350	6.350	6.350	9.478	9.478
Kartoffeln . . . . .	2	0.12	745	818	780	6.817	6.500
Hülsenfrüchte <sup>2)</sup> . . . . .	0.4	0.53	6.000	6.000	6.100	11.321	11.509
Pflanzenfett . . . . .	0.12	1.90	21.250	22.375	22.250	11.776	11.711
Margarine . . . . .	0.12	1.90	23.700	23.700	23.700	12.474	12.474
Schweineschmalz . . . . .	0.06	1.90	26.000	25.500	26.200	13.421	13.789
Rindfleisch (hinteres) . . . . .	1.5	2.20	18.600	22.000	28.000	10.000	12.727
Zucker . . . . .	0.4	0.84	9.525	11.875	13.300	14.137	15.833
Kondensmilch (gezuckert) . . . . .	0.25	0.60	7.800	7.950	8.425	13.250	14.042
Kaffee, Bohnen- (gebrannt) . . . . .	0.07	4.30	53.500	54.500	57.750	12.674	13.430
Kaffee, Malz- . . . . .	0.07	1	10.450	10.100	10.100	10.100	10.100
„ Franck- . . . . .	0.07	0.88	15.235	15.350	15.750	17.443	17.898
Tee . . . . .	0.03	13	82.500	95.500	97.000	7.341	7.462
Speisesalz . . . . .	0.07	0.30	4.800	4.700	4.750	15.667	15.833
<b>II. Bekleidung:</b>							
Anzug <sup>3)</sup> . . . . .	0.015	45	795.000	795.000	790.000	17.667	17.556
Hemd <sup>4)</sup> . . . . .	0.06	4.50	74.400	75.900	77.400	16.867	17.200
Schuhe <sup>5)</sup> . . . . .	0.04	14	160.000	160.000	161.000	11.429	11.500
<b>III. Wohnung:</b>							
Zimmer, Küche, Kabinett . . . . .	0.025	108	37.374	37.374	<sup>6)</sup> 37.374	346	346
<b>IV. Beheizung und Beleuchtung:</b>							
Petroleum . . . . .	1	0.28	2.600	2.600	2.900	9.286	10.357
Holz . . . . .	12	0.06	570	570	560	9.500	9.333
Kohle . . . . .	14	0.042	977	1.040	1.040	24.762	24.762
Zündhölzer . . . . .	1	0.02	270	260	263	13.000	13.150

<sup>1)</sup> Als Mengeneinheit ist anzusehen: Bei den Lebensmitteln, bei Holz und Kohle: 1 kg; bei Petroleum: 1 l; bei Zündhölzchen: 1 Schachtel; bei Anzug und Hemd: 1 Stück; bei Schuhen: 1 Paar; bei Wohnung: ein Vierteljahreszins.  
<sup>2)</sup> Durchschnitt der Preise für Bohnen und Trockenerbsen.  
<sup>3)</sup> Qualität: Friedenspreis K 45.-.  
<sup>4)</sup> Qualität: Friedenspreis „ 4.50.  
<sup>5)</sup> Qualität: Friedenspreis „ 14.-.  
<sup>6)</sup> Davon K 54 Grundzins (halber Friedenszins), K 16.200 Mietzins (hundertfünzigfacher Friedenszins), K 10.800 Betriebskosten, K 4.320 Mietzinsabgabe, K 6.000 Reinigungsgeld.

**Notes.** The image is an excerpt from the Statistical handbook for the Republic of Austria published in 1923 reporting the evolution of prices during Austria's hyperinflation crisis.