Measuring Conflict Inflation[†]

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Abstract

This paper tests the Rowthorn (1977) conjecture that inflation is driven by aspirational conflict or disagreement over relative prices with a novel news-based measure of price conflict over 1860-2023. The Price Conflict Index (PCI) varies significantly over time, with persistent spikes around the McKinley tariffs, during the Great Depression, and prior to the Volcker disinflation. Variation in the PCI stems from industrial actions, tax rate changes, and political pressure on the Federal Reserve. Positive changes in the extensive and intensive margins of price conflict foreshadow high inflation, low real wages, reduced output and stock returns, and elevated unemployment. Greater price conflict is also associated with rising inflation expectations and a higher probability of an inflation disaster. Topical analysis reveals that disagreement over wages, in particular, plays a central role. At the regional level, the impact of the PCI on state-level inflation is driven by tradable goods, suggesting national price setting. Overall, this paper provides broad empirical support for a conflict-based theory of price fluctuations.

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1 Introduction

Understanding the mechanism behind aggregate price fluctuations is fundamental to macroeconomics. The recent, persistent surge in inflation has reinvigorated academic and policy interest in the propagation channels of price changes. Among others, Lorenzoni and Werning (2023a) have reignited interest in the Rowthorn (1977, 2024) conjecture that general inflation is driven by conflict — or disagreement — over relative prices. According to the conflict view, inflation is a function of the time-varying gap between the aspirations of different economic stakeholders.[1] This has also been linked to the classic wage-price spiral (Blanchard, 1986; Lorenzoni and Werning, 2023b). Despite its promise, both foundational and contemporary work on the conflict view remains largely theoretical, with limited empirical validation. How can disagreement over prices be credibly measured in the data? What are the fundamental drivers and macroeconomic consequences of price conflict? What is the role of inflation expectations?

In the present paper, we provide the first empirical test of the conflict view of inflation using state-of-the-art methods and U.S. data that spans 160 years. Our first key contribution is measurement. Applying recent advances in textual analysis to U.S. newspaper data, we build a novel text-based time-series measure — the Price Conflict Index (PCI). The PCI performs remarkably well in terms of historical plausability and captures relevant episodes such as union strikes and price controls. We supplement our baseline measure with several topical indicators of conflict on specific prices, such as on wages or tariffs, as well as an index that gauges the intensive margin of price conflict.

Our second key contribution is to estimate the impact of price conflict on various macroeconomic aggregates. We show that positive changes in the PCI lead to higher future inflation, lower real wages, weaker output growth, higher unemployment, and lower stock market returns. We also show that positive changes in the PCI are associated with higher inflation expectations, with interesting heterogeneity across various agents. In addition, high price conflict increases the probability of inflation disasters, i.e. episodes of abnormally high inflation or deflation. Finally, changes in the PCI have heterogeneous effects on local, state-level inflation and across tradable and non-tradable industries. Overall, this paper provides broad empirical support for a conflict-based theory of price fluctuations.

Measurement. The PCI is constructed from the digitized archive of The New York Times and by leveraging tools from Generative Artificial Intelligence (GenAI). Every article is fed into a chat instance of an LLM, specifically the OpenAI's flagship ChatGPT 4o model,

[1] For example, the aspiration of the average worker is real wage income, while the aspiration of the average firm is the profit margin.

via its Application Programming Interface (API) with the aim of identifying instances of price conflict based on a carefully constructed prompt. Our multi-step prompt engineering approach, which trades off over- and under-fitting the language model, has yielded a baseline prompt which proves to be remarkably robust to various alterations. Equipped with the baseline prompt, our algorithm produces a binary outcome for every article and takes the value of unity if price conflict was detected and zero otherwise. Aggregating these responses to the time-series level yields the baseline PCI measure that runs from 1860 until 2023.

Validation. The PCI has been validated with a battery of checks. We highlight the three most important tests, with many more discussed later in the paper. First and foremost, it is well known that GenAI models are probabilistic in nature. Running the same prompt on the same model and vintage can produce materially different responses. To deal with the threat of counting false positives or rejecting false negatives, we run our prompt *five* separate times and only retain cases that register price conflict every single time. Second, we establish the index's historical plausibility by providing a careful narrative account of its major spikes. The PCI picks up historically relevant events, such as tariffs, industrial actions, price controls, and episodes of high price turbulence, remarkably well. Third and finally, thousands of positive and negative cases have been carefully read by a team of human auditors. The human audit exercise yielded low single-digit probabilities of Type-I and Type-II errors, suggesting high levels of accuracy.

Drivers of Price Conflict. Equipped with an accurately measured and validated index of price conflict, the PCI, we then study its economic causes. To understand the origins of price conflict, we try to predict the PCI with an array of explanatory factors such as the monetary base from Jordà et al. (2016, 2019), the individual income tax rate, house prices, geopolitical risk from Caldara and Iacoviello (2022), the short-term interest rate, fiscal revenues, fiscal expenditures, the number of workers involved in strikers, crude oil prices, the index of tariff intensity from Irwin (2010), and an index of political pressure on the Federal Reserve from Drechsel (2024). We find that time-series variation in the PCI stems mostly from industrial actions, tax rate changes, and political pressure on the Fed. This finding points to our index capturing disruptive incidents that are likely to spur a lot of debate and disagreement on real disposable incomes, profit margins, or interest rates. It also emphasizes the importance of understanding the mechanisms through which political influence on the Fed propagates through financial markets and the real economy (Bianchi et al., 2023).

Macroeconomic Implications of Price Conflict. What are the implications of spikes in the PCI for the macroeconomy? Based on estimates from local projections on 130 years of quarterly U.S. data obtained from Ramey and Zubairy (2018), among other sources, we document that a higher PCI is associated with economically large and statistically significant, contemporaneous and dynamic, positive effects on inflation, as measured by the GDP implicit price deflator. We also find that positive price conflict changes are associated with a future decline in real GDP growth, stock returns, and real wages, and an increase in unemployment. The divergence in the responses of quantities and prices following a price conflict spike suggests that it is unlikely that we are capturing a demand-side disturbance, such as shocks to monetary policy or aggregate uncertainty (Leduc and Liu, 2016). Instead, this pattern of responses is consistent with a supply-side disturbance. Furthermore, evidence from Granger causality tests shows that price conflict Granger-causes inflation, but inflation does not Granger-cause price conflict. This implies that the direction of causality in this empirical relationship potentially flows from the PCI to inflation, although this evidence is only suggestive.

Inflation Expectations. An important literature studies how agents form expectations of key macroeconomic aggregates, such as inflation (Coibion et al., 2022; Coibion and Gorodnichenko, 2015a). We show that the pass-through from changes in the PCI to future inflation is reflected in elevated inflation expectations of professional forecasters and central banks. Interestingly, the impact on the inflation expectations of households is more muted, which is in line with the documented heterogeneity in the expectation formation mechanism of households and professionals (Coibion and Gorodnichenko, 2015b). To the extent that our PCI index captures time-varying disagreement by various economic agents, this finding also corroborates the importance of the dispersion of first- and higher-order beliefs about future inflation (Mankiw et al., 2003; Coibion et al., 2021; Fofana et al., 2024).

Inflation Disasters. Abnormally high inflation or deflation can have significant independent effects on consumption behavior (Ryngaert, 2022; Hilscher et al., 2022). Moreover, when inflation is sufficiently high, attention towards inflation grows, which can amplify the impact of supply shocks (Pfäuti, 2025). We show that positive changes in the PCI are associated with a higher probability of experiencing an episode with either very strong positive or negative price changes up to eight quarters ahead. This finding suggests that incorporating time-varying measures of disagreement on relative prices can improve the accuracy of forecasts of inflation disasters, which is known to be challenging (Hilscher et al., 2022).

Intensive Margin of Price Conflict. Our baseline measure effectively captures the *extensive margin* of price conflict. To gauge the intensive margin, we also run a separate prompt that asks the model to evaluate the intensity of each registered conflict case on a scale of 1 to 10. Averaging out the intensity score across all quarters yields a measure of conflict intensity. We document that high intensity of price conflict also leads to higher inflation, lower real wage growth, and a decline in quantities. Interestingly, the extensive and intensive margins of price conflict have divergent time-series properties. For example, while the three global peaks of the PCI are in 1890, 1922, and 1933, the global peak of the intensity measure is, in fact, in 2023.

Topical Indices. In addition to producing aggregate indices of price conflict, we also create several novel topical measures. We decompose the baseline PCI by price type and construct indices of disagreement on wages, prices of goods and services, real estate prices, interest rates, energy prices, and tariffs. We document that disagreement on wages is particularly important in terms of driving the variation in the PCI over time and in terms of its dynamic association with price changes and real wage changes. This finding reinforces a view that the concepts of wage-price spirals and conflict inflation are related.

Regional Effects. Finally, to understand whether our conflict measure has homogeneous effects over U.S. regions, we estimate the regional impacts of the PCI on local inflation. Using state-level data on non-tradable and tradable sector CPI inflation from Hazell et al. (2021), we document rich heterogeneity in the regional effects of changes in national price conflict. Interestingly, the effects are mostly concentrated in tradable-good inflation, while the impacts on non-tradable inflation are more muted. This finding is in line with the principle of national price setting, because prices of tradable goods are likely to be set by firms uniformly across space with regional characteristics playing a smaller role, and is also in line with the extensive evidence from Hazell et al. (2022) on the national wage setting of firms in the U.S.

Literature. Our paper is most clearly related to the literature that links inflation to disagreement or conflict among stakeholders over relative prices. Building on the canonical Rowthorn (1977) conjecture, Lorenzoni and Werning (2023a,b) have revived the interest in this research question by providing a general theoretical treatment. Other important recent contributions include, among others, Wildauer et al. (2023), Beaudry et al. (2023), van der Ploeg and Willems (2024), Guerreiro et al. (2024), and Afrouzi et al. (2024).

The challenge for this literature is that it is almost entirely theoretical. One recent

exception is Guerreiro et al. (2024), who use survey data to quantify the willingness of workers to incur costly actions, i.e. conflict costs, for their nominal wages to catch up with price inflation. Another classic exception is Mankiw et al. (2003), who show that the time-varying dispersion of inflation expectations is a strong predictor of future price changes. Similarly, Reis (2021) focused on the wedge between market and survey measures of long-horizon inflation expectations. The contribution of the present paper is to measure conflict and disagreement about prices solely from newspaper texts and *without* directly relying on any actual data on expectations or realized price changes. The measures produced in this paper can facilitate calibration and parameterization of existing theoretical frameworks.

This paper is contributing to the empirical literature that combines text analysis and newspapers in order to extract economic information and build aggregate time-series indicators. In an influential contribution, Baker et al. (2016) leverage newspaper articles to build an index of economic policy uncertainty. Caldara and Iacoviello (2022) use rich newspaper data to measure geopolitical risk at a high frequency for many countries and years. Several studies have focused specifically on the origin of inflation through the prisms of textual analysis and long historical data. In particular, Caldara et al. (2024a) introduce a novel index of shortages (of materials, labor, energy, etc) and show that shortages can generate persistent inflationary effects. Caldara et al. (2024b) show that heightened geopolitical risk foreshadows inflationary pressures. Our contribution relative to this strand is to emphasize the conflict view of price fluctuations. To the best of our knowledge, we are the first to bring the conflict theory of inflation to the historical data and to cover over 160 years.

Finally, this paper contributes to the methodological literature that leverages text as data (Loughran and McDonald, 2016; Gentzkow et al., 2019; Ash and Hansen, 2023). Our particular emphasis is on a novel application of advanced LLMs and GenAI tools. GenAI, in particular, has proven to be highly effective in increasing workflow efficiency for researchers and individuals in various contexts, offering substantial productivity benefits when used to automate micro-tasks (Korinek, 2023; Ash et al., 2024; Brynjolfsson et al., 2025). For example, Fetzer et al. (2024) use AI to build a novel measure of input-output production networks across many years and countries. Geiecke and Jaravel (2024) and Hansen et al. (2024) use GenAI and LLMs to create synthetic personas to conduct qualitative interviews at scale and to simulate professional economic forecasters, respectively, thus providing low-cost alternatives to traditional methods with no obvious sacrifice in accuracy. Our methodological contribution is to leverage state-of-the-art advances in LLMs and GenAI to provide new measurements and validation for the conflict theory of price fluctuations.

2 Measurement

In this section we discuss the data and the approach to measuring price conflict.

2.1 The New York Times Digital Archive

Our primary news text database is the New York Times (NYT) digital article archive. The compilation can be obtained from archive.nytimes.com. The dataset spans 1853-present and we have obtained digital access to the headline and (where available) leading paragraph of every article from every year. We discard the early years due to lower quality and focus on the 1860-2023 period throughout the rest of the analysis. The approach of using NYT as a primary news source has at least two advantages. First, the NYT covers major national, domestic news. Our empirical analysis will use aggregate, nationwide macro-historical data. Thus, a national newspaper fits our empirical strategy because any uncovered incidents of price conflict are more likely to matter for the aggregate economy. Second, this newspaper does not exclusively cover economic news. As a result, any incidence of price conflict is likely to be salient enough for the general-interest outlet to cover it.

2.2 Why Generative AI tools?

What are the reasons for leveraging large language models (LLMs) and generative AI (GenAI) to build an index of price conflict? There are two simple answers: time and money. First, the speed at which machines can process vast amounts of textual data is incomparably greater than that of humans. Consider some simple, rough estimates. Our dataset contains, on average, 60,000 articles per year. For each article, we have metadata including the publication date, headline, and lead paragraph. How long would it take a human to judge whether an article and its lead paragraph contain evidence of price disagreement? Suppose it takes three minutes per article. Processing 160 years of data — at 60,000 articles per year — would require approximately 55 years of uninterrupted labor by a single person. In contrast, our model completes this task in a single day.

Second, the financial cost of completing the task manually would be astronomical — approximately $14.4 million, assuming a wage rate of $30 per hour. In contrast, running a single prompt on the full dataset cost us less than $300 using OpenAI's flagship GPT-4o-mini model. These enormous savings enabled us to conduct numerous additional tests and robustness checks that would have otherwise been infeasible. Ours is thus a clear-cut example of how micro-task automation can facilitate economic research (Korinek, 2023). However, there remains a serious risk that AI may yield erroneous or limited results, as

illustrated by the Grossman and Stiglitz (1980) paradox (Acemoglu, 2024). Active human oversight and verification of AI-generated outputs remain essential. Accordingly, a human audit of our baseline measure — conducted by a team of skilled humans — is a core component of the validation process.

2.3 General Methodology

As mentioned previously, in this paper we leverage recent advances in machine learning and large language models (LLMs) to extract relevant contextualized information about price conflict from the NYT archive. Specifically, we employ the OpenAI's flagship GPT-4o class of models via the OpenAI's Application Programming Interface (API). The GPT-4o generation of models is among the most capable LLMs at the moment and also behind web tools such as the current ChatGPT. Yet, rather than accessing the web-interface, sending articles to the underlying model directly via parallelized API calls allows the LLM to read thousands of articles from the newspaper archive simultaneously. We take full advantage of OpenAI's *Batch API* tool, which is essentially cost-efficient parallelization of requests on the cloud. In addition, this project operates under OpenAI's highest rate limit tier, which allows for the maximum possible number of requests per minute.

2.4 Prompt Engineering

A critical element of our methodology is prompt construction. We have pre-selected a non-random sample of hundreds of articles across years that corresponded to famous incidents of distributive conflict such as large union strikes. As a placebo, we also collected a number of articles that relate to non-price conflict such as wars. We have iterated over the prompt with the goal of matching our own priors over the chosen articles most of the time. It turns out that three points are noteworthy. First, simpler and more direct prompts are more desirable. This observation is related to the classic over-fitting problem: there is a clear trade-off between providing necessary information for learning and persona shaping and over-fitting the model. Second, the model performs remarkably well with clear-cut situations, i.e. when there are obvious mentions of price conflict such as tariffs or union strikes.

Third, and most importantly, the model often performs as well if not better than humans on cases that are objectively unclear. To illustrate what is meant by this, we make available in Table A.5 of the Online Appendix 20 cases. These cases include information on the article headline, leading paragraph, the judgment and explanation of the LLM, and the human auditors' opinion. Readers are welcome to read and classify those articles as conflict and non-conflict based on their own judgment. Overall, we argue that our model can do as well

if not better than a skilled human in all cases that are clear-cut and in the vast majority of the more dubious ones. Later in the paper, we discuss in greater detail the formal human audit exercise where a team of people reads thousands of cases and detects false-positives as well as false-negatives.

Our strategy consists of several separate steps to avoid overloading the models with too many tasks at the same time. First, we use what we refer to as a "baseline prompt" to detect those articles that discuss economic conflicts over prices and wages. Second, we analyze only the conflict articles again with a "topic prompt" to determine which precise conflict topic was discussed in them. Third, to gauge the intensive margin of price conflict, we also construct the "intensity prompt". All prompts are described in detail below and are listed in Table 1.

Baseline prompt. Each baseline, topical, and intensity prompt consists of two basic parts. A system part which assigns a persona to the LLM instance, and the main part which contains the article and the task. First, the system part reads: *"You are a professor of economic history at a top US research university. You study disagreement over prices or wages between stakeholders."* This system prompt helps focus the model on the right thematic direction. As we later uncover, including the system prompt does not necessarily impact the results on the *relationship* between price conflict and the business cycle, however, it can impact the *level* of the resulting conflict measure.

Second, the main part of the baseline prompt reads: *"Does the excerpt mention disagreement or conflict between stakeholders over prices or wages in the United States? If it does, please explain why in one sentence. If it does not or if the text contains insufficient information, please only reply with 'No'."* Interestingly, we validated by reading through examples classified by the model that the suggestion to explain its decision in one sentence seems to make the detection of conflicts more accurate and thought-through. We thus feed every article headline and leading paragraph into the model, initiate the same prompt, and store a binary answer: unity if conflict is detected (and explained why) and zero otherwise. As a result, for every year in the sample we obtain the count of detected conflict cases. The time-series aggregate of this count is essentially our primary index. For this task, we use GPT-4o-mini because it is highly accurate, fast, and cost efficient. We have also tried the costlier model GPT-4o and found no material differences from the baseline.

Intensity Prompt. In order to gauge the intensive margin of price conflict, we focus on the set of articles that the model replied with unity to before and ask the model to rate the intensity of each conflict case. The intensity prompt reads as follows: *"The excerpt possibly*

mentions disagreement or conflict between stakeholders over prices or wages in the United States. How serious is this disagreement? Rate from 1 to 10, where 1 is least serious and 10 is most serious. Reply only with a number. Reply with 0 if there is insufficient information." For this task, we employ the model GPT-4o, which is best suited for the more nuanced questions.

Topic prompt. In order to categorize each conflict incident by topic, we focus on the set of articles that the model replied with unity to before. For this task, we also employ the model GPT-4o. In an additively-separable way, we ask the model to classify all yes-cases into topics with the following prompt: *"The excerpt possibly mentions disagreement or conflict between stakeholders over prices or wages in the United States. Which of the following categories fits best?"*

Motivated by existing theories on conflict inflation, we choose 7 price categories that are, verbatim: *"1. Disagreement over wages, 2. Disagreement over prices of goods or services, 3. Disagreement over real estate prices, 4. Disagreement over central bank interest rates, 5. Disagreement over energy prices, 6. Disagreement over tariffs, 7. Any other topic or insufficient information. Reply only with the associated number '1', '2', '3', '4', '5', '6', or '7'."*.

2.5 Temperature Setting

A critical parameter for modern GenAI models is the so-called *temperature* setting. Increasing model temperature generally broadens its creativity and willingness to operate outside the box. For all of our baseline analyses above we had set the temperature to 0, which is the global minimum option. Zero temperature forces the model to be as conservative in its reading of text as possible. As such, this generally leads to lower counts of price conflict cases. As a robustness check, we have also raised the temperature setting to 1, which is OpenAI's default option in many situations. While this extension increases the *count* of conflict cases, the *cyclical* patterns and macroeconomic correlations do not change materially. In other words, we find that the temperature setting affects the level (average) but not the cycle of the price conflict measure.

2.6 Post-Filtering for Keywords

One concern is that our prompt detects articles which also contain the word "inflation" and records these as conflict. One can argue that the correlation of our index with headline inflation, if any, is not meaningful and occurs by construction. We therefore manually remove all instances where the model flagged an article and that article text had also contained the words "inflation" or "deflation". It turns out that none of our baseline results change

quantitatively. In other words, an index computed based only on those conflict articles that do not mention the words "inflation" and "deflation" directly is almost identical to the baseline. We will return to this robustness test later in the paper.

In addition to the above, due to the phrasing of our research question, it is possible that LLMs mistake military or physical conflict for disagreement about prices. In other words, *conflict* is a sharp keyword that helps pointing the model in the desired direction. On the other hand, the same keyword obviously applies to many other, unrelated, circumstances. To address this concern, we remove all instances where the model flagged an article with price conflict and that article text had also contained the words "military" or "war". Our measures and results do not change materially.

2.7 Comparison with Word Counting

The keyword filtering step above highlights a crucial advantage of our LLM-based approach over the more traditional but simple computational linguistics methods. For example, an influential literature employs word-counting tools in various economic and financial applications (Baker et al., 2016; Hassan et al., 2019). However, detecting price conflict is very nuanced and word counting would likely significantly under-deliver in terms of identifying subtle contexts. Moreover, since we remove the words such as "inflation" and "deflation" from the final index, word-counting methods would fail to capture conflict-related articles unless those keywords appeared explicitly.

On the other hand, traditional word counting offers several advantages over LLMs. First and foremost, it is much less of a "black box." With an exogenously defined dictionary of keywords, the researcher knows exactly what is being measured. Second, off-the-shelf LLMs are trained on essentially the entire textual information set, which may make them prone to information bias. This concern is similar to the one often raised against full-information statistical estimation methods. A potential solution would be to self-train a new model or to aggressively fine-tune an existing one for the task at hand. However, this is typically not feasible. All in all, there is a trade-off involved in using either approach. We believe that the enormous feasibility and scalability benefits of modern LLMs vastly outweigh their potential disadvantages.

2.8 Robustness: The Economist Digital Archive

One could argue that external validity is an issue for our analysis since we only leverage The New York Times archive. As a robustness, we have also employed the historical archive from The Economist magazine, with the sample running from 1890 until 2020. Unfortunately,

accessing the actual texts from The Economist is not possible, and only simple keyword counting tools are currently available. This corroborates why the NYT archive — coupled with advanced LLMs — is a much better approach. Nevertheless, it may still be useful to use an alternative dataset, albeit the measurement tool is somewhat inferior. Thus, we construct a novel dictionary of some 70 words (unigrams) and two-word (bigrams) combinations that relate to conflict or disagreement on prices or wages. The keywords are listed in Table A.6 of the Online Appendix. With this dictionary, we construct another time-series measure of price conflict, but this time exclusively based on The Economist. We will lately obtain similar results when using this alternative index.

3 The Price Conflict Index: 1860-2023

In this section, we discuss our baseline index, the index of intensity of price conflict, as well as six topical measures of conflict on specific unit prices.

3.1 Baseline Index

We can now define our baseline index as follows. Let $c_{j,t}$ be a binary indicator that takes the value of unity if the article j in year t is identified by the LLM as containing discussions of price conflict. The index is then defined as follows:

$$C_t = \frac{\sum_{j}^{N_t} c_{j,t}}{N_t}, \tag{1}$$

where N_t is the number of articles in a given year. Our measures therefore take into account any trends in the number of articles over time.

Figure 1 plots the baseline quarterly Price Conflict Index (PCI), C_t, from 1860 to 2023. The index varies significantly over time and, at first glance, its peaks tend to correspond with historically notable and relevant episodes. In the next sections, we provide through validation of the index to confirm that its variation indeed captures economically meaningful highlights in disagreement about relative prices.

3.2 Determinants of the Baseline Index

In this section, we study the drivers of price conflict statistically. This approach complements the narrative account that will be provided in Section 4.1. To this end, we assemble an array of

potential explanatory factors: the monetary base, the labor tax rate, house prices, geopolitical risk, political pressure on the Federal Reserve, the short-term interest rate, fiscal revenues, fiscal expenditures, fraction of workers involved in strikes, the tariff intensity index, and the oil price. Table A.1 in the Online Appendix describes the data and lists all sources. We estimate linear regressions with one- and four-quarter ahead baseline PCI as the dependent variable and the explanatory factors as independent variables. The former represent short-term and the latter more longer-term effects. All regressions are estimated with one regressor at a time.

Figure 6 reports the results in the form of point estimates and 68% and 90% confidence intervals. Each row represents a different explanatory factor. We find that three characteristics are strongly associated with greater incidence of price conflict and disagreement — labor income taxes, union strikes, and political pressure on the Fed. The tariffs index and geopolitical risk are borderline significant. The remaining variables do not seem to contain information to credibly predict movements in price conflict as their effects are statistically insignificant. This finding points to the growing importance of understanding political influence on central banks as a propagation channel in both financial markets and the macroeconomy (Bianchi et al., 2023). It also suggests that our index captures disruptive events that are likely to trigger substantial debate and disagreement over real disposable incomes, profit margins, or interest rates.

3.3 Intensive Margin of Price Conflict

We now proceed by computing average quarterly intensity of price conflict. Recall that the intensity prompt is listed in Table 1. Let $i_{j,t}$ be a continuous variable over $[1, 10]$ with 10 indicating the highest degree of conflict intensity. Further, let K_t stand for the number of "yes" cases for which the model's response did not deliver a 0, i.e. "not sufficient information". Thus, the conflict intensity time-series can be defined as follows:

$$\mathcal{I}_t = \frac{\sum_{i}^{K_t} i_{i,t}}{K_t} \tag{2}$$

Figure 2 plots the resulting measure over 1860-2023. The time-series average is around 5, with significant variation across the years. The correlation of $\mathcal{I}_t$ and C_t is positive for certain years such as the 1920s, however, the two series generally diverge quite significantly. This suggests that the frequency of conflict-related articles and their potential seriousness in terms of economic implications are different concepts. For example, the global peak of $\mathcal{I}_t$

is 2020-2023, the years where the baseline index, C_t is low relative to the global average. In the meantime, the global peaks of C_t are during the 1890s, 1920s, and 1940s. This pattern could also be a manifestation of the growing "negativity bias" in news reporting, which is then picked up by our LLM (Baumeister et al., 2001).

3.4 Topical Decomposition

We now decompose our baseline conflict index into six price topics: prices of goods and services, wages, real estate prices, interest rates, energy prices, and tariffs. This is a fruitful exercise for at least two reasons. First, the original work by Rowthorn (1977) claimed that the aggregate surplus in the economy must be divided among the following major parties: the state, foreign suppliers, workers, and capitalists. Alternatively, the same division can be understood in terms of *unit prices*: tariffs, wages, other costs, goods prices, profits, etc. In this regard, our decomposition is important for theoretical reasons. Second, it is useful to identify the precise channels through which changes in price conflict empirically impact the economy. The baseline aggregate index may be too broad, and a more nuanced categorization is necessary to inspect the mechanism.

We begin with a quick validation of our topical indices in the form of word clouds. To construct these clouds, we merge all articles for which the model flagged a positive topical case and compute the frequency of the most commonly occurring words. Figure 3 presents six word clouds, one for each topical category. In all cases, the most frequent terms are explicitly related to the intended topic. For the conflict on wages index, the most frequently occurring words are "strike", "union", and wage." For disagreement on interest rates, the most frequent words are "rate", "interest", and "bank". For disagreements on tariffs: "tariff", "duty", and "import". For energy: "price", "oil", and "gas". For prices of goods and services: "new", "price", and "rate". Finally, for real estate prices: "rent", "tenant", and "house." Overall, the topical indices of conflict by price type appear to capture the correct intended topics.

Figure 4 presents the separately-additive decomposition of the baseline index by price topic in the forms of stacked bars. We discard the seventh, "insufficient information", category. For tractability, we present annual-frequency data over 1860-2023 and quarterly-frequency data over 1950q1-2023q4. We draw from the Figure several noteworthy conclusions. First, disagreements on wages and on prices of goods and services drive most of the dynamic of the baseline measure. Second, disagreement about real estate prices is the highest around the Great Financial Crisis. Third and finally, disagreement about tariffs is high in the early decades of the sample during the high-tariff era, and there is a noticeable

spike around 2016-2020.[2]

4 Validation

In this section, we perform several extensive exercises to validate our index. We focus primarily on the baseline PCI index, C_t. First, through a historical account we confirm that fluctuations in the index provide a plausible summary of relevant real-world events. Second, the PCI is compared against actual price and wage changes in the U.S. Third, as mentioned previously, we provide 20 case studies of the actual articles in our sample that discuss price conflict. Fourth and finally, we describe our human auditing exercise that confirms the validity of our measure through careful reading of thousands of cases by a team of people.

4.1 Historical Plausibility

In this section, we conduct a historical plausibility test. If our index in Figure 1 is indeed economically meaningful, then it must provide a realistic summary of the historical evolution of price and wage related disagreements. We begin with the first spike in the index, which is observed around mid to late 1870s. These years were marked by the Great Railroad Strike of 1877, which was the nation's first general upheaval and a reaction to consecutive wage cuts by major railroads. There was also the Long Depression of 1873-1879, that followed from the panic of 1873 and led to widespread wage cuts and deflationary pressure.

The index surges around the 1890s, a period characterized by several high-profile events that could spur price and wage conflict. First, most notably, is the McKinley Tariff Act of 1890, which raised the average duty on all imports to almost 50% (Irwin, 2017). It was being hotly debated, as business interests pushed for higher duties while farmers and consumers protested rising prices. Second, the late 19th century in the U.S. was characterized by the "free silver" movement, an advocacy for unlimited coinage of silver and, as a result, expansionary monetary policy. Third, there was the panic of 1893 which lead to soaring unemployment and deflationary pressure. Finally, the Wilson-Gorman tariff act of 1894 attempted to reduce the tariff rates while imposing a new Federal income tax on a subset of the population. The income tax provision was later ruled unconstitutional by the Supreme Court.

Another notable spike in the index is around 1920. After World War I, the end of wartime price controls, wage stagnation, and falling standards of living all contributed to escalating economic tensions. As a result, amid workers' growing demands for better pay and working

[2]In Figure A.2 of the Online Appendix, for completeness, we also show the time-series plots of the six topical indices.

conditions, in 1919, hundreds of thousands of American workers went on a wave of strikes. Additionally, the Fordney-McCumber Tariff Act of 1922 raised import duties, benefiting industrialists but hurting farmers, who faced high costs and collapsing global demand. This further sparked disagreement over fairness in economic policy.

In the 1930s, The Smoot–Hawley Tariff of 1930 raised import duties to historic highs, prompting retaliatory tariffs and potentially worsening the Great Depression (Irwin, 1998). Furthermore, massive unemployment, wage deflation, and New Deal policies like the National Industrial Recovery Act (NIRA) of 1933 drove conflict over centralized price and wage codes. The early New Deal years saw intense strike activity — including the 1934 Toledo Auto-Lite strike, the 1934 Minneapolis Teamsters strike, and the West Coast waterfront strike — all demanding better wages and union recognition. These highly publicized events stoked national debate and disagreement about the role of labor in economic recovery.

In 1942-1946, the Office of Price Administration (OPA) imposed widespread price and wage controls (Abramson, 1942). While intended to curb inflation and support the war effort, they generated black markets, public resentment, and political backlash — widely debated in newspapers. Around 1945-1946, the largest strike wave in U.S. history unfolded as wartime wage controls were lifted. Nearly 5 million workers walked out, including steel, coal, and auto workers, demanding wage increases to match war-related inflation. The scale of disruption and its economic implications dominated news cycles.

In 1962, there is a spike in the PCI index that corresponds to the start of the Great Inflation era of 1962-1984 (Bordo and Orphanides, eds, 2013). In 1962, U.S. President Kennedy began implementing informal "wage-price guideposts" as a way to contain inflation without formal controls (Slesinger, 1967). He publicly encouraged industries and unions to exercise restraint and to accept the "productivity benchmark" as a "guide" to wage and price setting decisions. In its 1962 Economic Report, The Council of Economic Advisors famously coined the term "guideposts" that were supposed to encourage non-inflationary wage and price behavior.

In 1973, the OPEC oil embargo caused prices to spike dramatically, contributing to stagflation (high inflation and stagnant growth) (Barsky and Kilian, 2002; Blanchard and Galí, 2007). Labor unions demanded cost-of-living adjustments. In addition, U.S. President Ford's "Whip Inflation Now" (WIN) campaign of 1974 tried to rally public restraint on spending and encourage private savings. As detailed by the Washington Post, among others, at the time, the initiative was reported to be heavily contested and largely not successful.

The 1980s marked a pivotal period when the Federal Reserve, under Chairman Paul Volcker, raised interest rates to historic highs in an aggressive effort to tame double-digit inflation (Goodfriend and King, 2005). This sharp tightening of monetary policy triggered the deepest postwar recession up to that point, with unemployment peaking at over 10%,

sparking conflict over the trade-offs between price stability and job losses. The federal funds rate reached a peak of nearly 20% in 1981, making borrowing prohibitively expensive for consumers and firms. While the short-term economic pain was severe, Volcker's policies ultimately succeeded in ending the high-inflation era. This is corroborated by the persistent decline in the PCI index from the turbulent 1970s through the early 1990s.

During the Great Financial Crisis of 2008-2009, the collapse of the housing market and banking system triggered the worst recession since the 1930s. Unemployment surged to 10% in 2009, while wages either stagnated or declined — sparking conflict over layoffs, executive bonuses, and working conditions. Furthermore, government bailouts of Wall Street firms (e.g., AIG, Goldman Sachs) contrasted sharply with the struggles of ordinary workers and homeowners. This fueled media discourse around fairness and class conflict.

Finally, supply chain disruptions, fiscal stimulus, and pent-up consumer demand caused inflation to surge in 2021–2023, reaching levels not seen since the 1970s (Bernanke and Blanchard, 2023). The sharp rise in prices, especially for food, housing, and energy, sparked growing public frustration and led to widespread scrutiny of corporate pricing practices — with terms like "greedflation" entering the debate. At the same time, a tight labor market and rising cost of living helped fuel a resurgence in labor activism, including high-profile strikes at Starbucks and among unionized auto workers (UAW). Public support for unions reached its highest level in decades, and many workers began demanding cost-of-living adjustments, better wages, and stronger workplace protections, marking a shift in the tone of national wage debates.

Overall, fluctuations in our index are generally associated with historically accurate episodes of elevated disagreement and conflict about prices, wages, and the standard of living. In Section 3.2, we have studied the determinants of the PCI more formally using econometric tests.

4.2 Comparison with Actual U.S. Price Changes

The second test of validation of our measure is a comparison with actual, realized price changes. Indeed, this is a key research question of the paper. To this end, we obtain the historical time-series of U.S. GDP implicit price deflator and wages from Ramey and Zubairy (2018) and Jordà et al. (2016).[3] We compute the year-on-year inflation rate and refer to this measure as π_t. We will further refer to *real* wages as w_t.

Figure 5 plots inflation, π_t, and real wages, w_t, along with the price conflict index, C_t. We can notice a strong contemporaneous correlation between π_t and C_t, especially over

[3]Throughout the rest of the paper, we use linear intrapolation to obtain quarterly measures from the annual ones, whenever necessary.

the 1945-1985 period. Additionally, the contemporaneous correlation between $\mathrm{w_t}$ and C_t appears to be somewhat negative. In the next sections, we will also be testing dynamic relationships between π_t, $\mathrm{w_t}$ and C_t with local projections.

In Figure A.1 of the Online Appendix, we present the scatterplots of the PCI and the *absolute values* of inflation and real wage growth. At low levels of C_t, price changes of any sign are minimal. As C_t grows, however, there are more instances of years with either very positive or very negative realizations of both π_t and $\mathrm{w_t}$. Thus, at first glance it appears that if price conflict is high then price and wage fluctuations *of any sign* are high too. We will return to this association more formally later in the paper and confirm it with local projections in one of our robustness tests.

4.3 Case Studies

In this section, we discuss several specific case studies of positive and negative cases in order to provide more color on the LLM's justifications and reasoning. Table A.5 in the Online Appendix reports the following information. First, we provide the year, headline, and (if available) snippet of the first paragraph of a NYT article that we picked. Our choice was dictated by well-known incidents such as major union strikes. We also added five placebo articles that include discussions of irrelevant information, such as military conflicts or inequality. Third, we report our own judgment on whether an article contains evidence of price conflict. Fourth and finally, we report the model's response and justification (only in positive cases).

The model not only does a great job of correctly identifying positive and negative cases, but it also provides reasonably informative justifications for its decision-making. For example, the first case's headline reads "Railroad War in Nebraska." The model correctly identifies this and explains that the article discusses "disputes over pricing practices among competing railroad companies." Another interesting example is Case 6, which describes negative feedback on the Fordney Tariff Bill. The model again correctly marks this as a positive conflict case and, moreover, clearly classifies it under the topic of "tariffs" or "trade." Another example is Case 11, which details the fuel crisis of 1973. The model classifies this as a potential price conflict between a private stakeholder and President Nixon's administration. In all of these cases, the human auditors' opinions aligned with those of the model.

At the bottom of Table A.5, we also include five cases that are clearly not related to price conflict. For example, Case 20 discusses rising inequality and how "economists pin more blame on tech" for it. The model succinctly responds with a simple "No," as per our instructions. It seems that the model performs very well in handling false positives, as the next section corroborates more formally.

4.4 Human Audit

Extensive human validation of the PCI measure is crucial. While the GenAI model performs remarkably well on average, false positives and false negatives are simply inevitable — be it with models or with human evaluators. In order to quantify the approximate degree of inacuracy of classifying articles into conflict and non-conflict categories, we now describe our human audit procedure that follows closely the literature-standard practices (Baker et al., 2016; Caldara and Iacoviello, 2022).

We have asked several persons to read a number of randomly chosen articles to verify the model's decision. The author of this paper has audited 1,000 cases — 800 positives and 200 negatives. We have also recruited six graduate students at the University of Oxford. Each of them audited 400 positives and 100 negatives. The articles were chosen randomly with all years receiving an equal weight. Each auditor read the same article text (headline and lead paragraph) and baseline prompt as our LLM and was asked to reply with a simple "yes" or "no" to the prompt's question.

We present the results from the human audit exercise in Table 2. The accuracy of positives is defined as the average fraction of cases that the model identified as price-conflict related which the auditors also classified as such. This gauges the size of the Type-I error. The accuracy of negatives is defined accordingly. This, instead, gauges the size of the Type-II error. The averages are not weighted across auditors.

The table shows that the accuracy of correctly accepting positive cases and rejecting negative cases is very high across the years. As expected, accuracy is somewhat lower in the early decades of the sample, largely due to lower text quality. However, since 1900, the average accuracy for positives exceeds 90%, and for negatives, it exceeds 95%. Across all auditors and years, the probability of a Type-I (Type-II) error is around 6.2% (2.5%). For perspective, the correlation between the historical index of geopolitical risk in Caldara and Iacoviello (2022) and its human-audit counterpart is 93%. Our results suggest that human readers agree with the model's evaluation in the vast majority of cases. This finding is reassuring and further validates our measure as being accurate.

5 Macroeconomic Implications of Price Conflict

In this section, we study dynamic effects of our price conflict measures on the macroeconomy.

5.1 Historical Macro Data

In order to control for standard macroeconomic variables in our empirical tests, we obtain data from several publicly available sources. U.S. real GDP growth, GDP implicit price deflator, and the unemployment rate are from Ramey and Zubairy (2018). Since these variables end in 2016, we prolong them until 2022 with corresponding data from the FRED database. We obtain the T-bill interest rate and returns on the S&P500 index from Welch and Goyal (2007). Nominal wages are obtained from Jordà et al. (2019). Table A.1 in the Appendix describes all data, sources, and coverage.

5.2 Aggregate Economic Effects

We proceed with estimating the dynamic effects of price conflict changes on the macroeconomy. To this end, we run Jordà (2005)-style local projections. Following Montiel Olea and Plagborg-Møller (2021) and Jordà and Taylor (2025), we estimate the following lag-augmented long-difference specification:

$$\mathrm{Y}_{t+h} - \mathrm{Y}_{t-1} = \delta_h + \beta_h \tilde{C}_t + \mathbf{X}_t' \gamma_h + \mathrm{u}_{t+h}, \tag{3}$$

where δ_h is a constant, Y_t is an outcome variable, such as prices or real wages, $\tilde{C}_t$ is the change in the PCI measure, and u_{t+h} is the error term. $\mathbf{X}_t$ is a vector of controls that always includes the lagged dependent variable and lagged real GDP growth, stock returns, the short-term interest rate, and the unemployment rate. Following the insights from Ramey (2016), in order to mitigate autocorrelation in the treatment variable, we also include 4 lags of the change in the PCI. We refer to β_h as the impulse response function. In the next section, we explore sensitivity to lag length and show that results do not change if we include up to 16 lags. Confidence bands are computed according to Newey and West (1987).

Figure 7 reports impulse responses from the baseline local projection specification. Panels (a) and (b) report the dynamic responses of π_t and w_t to price conflict changes. The relationship is positive and statistically significant for up to 6 quarters in the case of inflation and negative and significant for up to 4 quarters in the case of real wages. The impact is economically large. A 1-standard-deviation price conflict rise increases inflation by around 60% of the dependent variable's standard deviation three quarters in. In words, spikes in conflict are associated with large and persistent increases in prices and declines in real wages — precisely what the conflict theory of inflation predicts.

We also document that positive changes in the PCI lead to negative responses from real GDP growth and stock returns, a positive response from the unemployment rate, and no

response from the short-term rate. The combined positive effect on prices and negative effect on quantities implies that price conflict changes behave as "supply-side" disturbances. Suppose that price conflict behaves like a negative supply shock: it reduces the supply of inputs (e.g. labor), leading to higher unemployment and lower aggregate production — which is what we find. Excess demand pushes prices up while real wages fall — which is also what we find. In this regard, our interpretation of the price conflict measure is also similar to Beaudry et al. (2023).

5.3 Inflation Expectations and Disagreement

An important body of literature examines how economic agents form inflation expectations (Coibion and Gorodnichenko, 2015a), as well as the role of disagreement and the dispersion of first- and higher-order beliefs about future inflation (Mankiw et al., 2003). Building on this, we investigate whether inflation expectations — and disagreement surrounding them — serve as a propagation mechanism through which price conflict affects realized price changes.

We obtain the data on inflation expectations from three sources. First, (one-year) expectations of households are proxied by the University of Michigan survey. Second, we use one-year professional forecasts of CPI inflation from the Survey of Professional Forecasters (SPF). Third, to gauge the expectations of policy-makers, we use the Cleveland Fed's one-year ahead expected inflation index. Finally, we obtain the data on disagreement over expected inflation from Fofana et al. (2024). Table A.1 in the Appendix provides more details.

Table 3 reports the results from regressions of various measures of inflation expectations and disagreement on those expectations at time t and four quarters ahead, using the PCI, C_{t}, as the main explanatory variable. The regressions also control for lagged inflation and lagged real GDP growth. To ensure a consistent sample across all four dependent variables, the quarterly regressions are estimated over the 1982–2022 period. The results show a positive and statistically significant association between the PCI and inflation expectations reported by both the Cleveland Fed and professional forecasters. Interestingly, the impact on household inflation expectations is not statistically significant, suggesting heterogeneity in how price conflict influences the expectation formation processes of professionals versus households. This finding aligns with prior evidence of heterogeneity in inflation expectations across different types of economic agents (Coibion and Gorodnichenko, 2015b). Finally, the effect of the PCI on disagreement in inflation expectations is not consistently statistically significant.

In Tables A.3 and A.4 of the Online Appendix, we report estimates of the effects

on inflation expectations from our six topical indices of price conflict. The overall picture remains unchanged: the impacts on the forecasters' and the Cleveland Fed's inflation expectations are positive and significant while the effects on households' inflation expectations and the disagreement measure are not significant (the latter two are not shown for brevity). Among the six topical indices, it appears that conflict on wages and on prices of goods and services are the most potent predictors of future inflation expectations.

5.4 Inflation Disasters

The density of possible realizations of positive and negative price changes has a small mass of abnormally large values. In other words, with a small probability an inflation disaster event can occur. Background inflation disaster risk can have direct implications on the consumption behavior of households (Ryngaert, 2022). Therefore, forecasting inflation disasters can be of particular interest to policy makers (Hilscher et al., 2022).

We now show that our index of price conflict is associated with elevated probabilities of future inflation or deflation disasters. We define an inflation/deflation disaster with an indicator variable that takes the value of unity if the absolute value of year-on-year price changes is greater than 4%. We choose 4% for two reasons. First, it is roughly the top 25% percentile of all price changes in our sample, either positive or negative. Second, Pfäuti (2025) shows that 4% is the threshold above which inflation becomes particularly salient in the minds of households, increasing the public's attention towards it, and thus amplifying the impacts of general supply-side shocks.

Table 4 presents the results from probit regressions of the inflation disaster indicator on the PCI. Each row reports the marginal effect of increasing the PCI index by one standard deviation on the probability of an inflation disaster at time t, four quarters ahead, and eight quarters ahead. We find that the effects are positive and statistically significant, even when we control for lagged real GDP growth and lagged (absolute value) of price changes. For example, a one standard-deviation positive change in the price conflict measure increases the likelihood of observing an inflation disaster event four quarters ahead by roughly 9% (column (5)).

5.5 Evidence from Intensity and Topical Indices

What is the impact of price conflict intensity on the macroeconomy? We now retain the same local-projection specification as before but use changes in the $\mathcal{I}_t$ measure as the main treatment variable. Panel (A) of Figure 8 documents that changes in $\mathcal{I}_t$ lead to greater inflation, lower real wage growth, a decline in real GDP growth and stock returns, and

higher unemployment. Thus, not only the extensive margin of price conflict but also the intensive margin has significant impacts on aggregate prices and quantities.

We now proceed with the presentation of dynamic effects of our topical indices on the macroeconomy. We first-difference each categorical index, use them as the main treatment variable, include the same controls, and use the same lag structure. Panel (B) of Figure 8 reports the results from local projections for the decomposition by topic. We document — based on panels (a) and (b) — that disagreement on wages and on prices of goods and services have the most sustained — economically and statistically speaking — effects on inflation. The impact of other topical indices is relatively mild and/or very short-lived. This finding suggests that price conflict and wage-price spirals could be closely related.

5.6 Additional Empirical Results

Time-varying effects of conflict on prices. To complement our baseline local-projection exercises, we also estimate time-varying effects of price conflict on inflation and real wages. We estimate rolling regressions with 30-year (120-quarter) windows. C_t is the main independent variable and either the four-quarter ahead inflation or real wage growth is the main dependent variable. The regressions also include four lags of the dependent and independent variables, as well as four lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate. Heteroskedasticity and autocorrelation consistent 90% confidence intervals are computed according to Newey and West (1987).

Figure A.3 in the Appendix shows the effects on inflation and real wages in two separate panels, with solid lines indicating point estimates and bars representing confidence intervals. We observe that the time-varying association between conflict and prices was particularly pronounced during the years 1950–1990. This period overlaps with the high-inflation era in the United States. These findings suggest that price conflict or disagreement accounted for a substantial share of inflation fluctuations during that time.

Granger causality tests. To assess whether the impact of price conflict on the macroeconomy is causal, we conduct a series of Granger causality tests. Table A.2 in the Appendix reports p-values from multiple specifications that incorporate most of the measures used throughout the paper. The underlying VAR system includes inflation, the first difference of the PCI, real GDP growth, the unemployment rate, stock returns, and the short-term interest rate. Unless otherwise noted, four lags of all endogenous variables are included.

The null hypothesis in each test is that the excluded regressor does not Granger-cause the dependent variable. Across all specifications we have examined, the general finding is that

price conflict Granger-causes inflation, whereas inflation does not Granger-cause conflict. In other words, the direction of causality in this empirical relationship appears to run from the PCI to inflation, rather than the reverse. However, this result should not be interpreted as definitive.

5.7 Sensitivity and Robustness of Main Results

Our finding of a dynamic association between changes in price conflict and price fluctuations may be complicated by two potential sources of concern: one related to the use of generative AI, and the other to the statistical aspects of our analysis.

5.7.1 Generative AI

Model temperature. Our baseline Price Conflict Index is computed with the global temperature parameter set to zero, implying the highest possible level of conservatism in the model's interpretation of documents. We now increase the temperature to one, which is the default setting in many OpenAI models. The results, shown in panels (a) and (e) of Figure 9, use inflation and the real wage as the dependent variables, respectively. The change in temperature appears to have no material impact on the results.

Prompt construction. Recall that the topical decomposition of the baseline indicator is additively separable and includes a residual "other" category. To address potential measurement error in the baseline measure, we construct a refined indicator by removing the "other" category and defining it as C_t minus the residual topic. We label the resulting robust index as C_t^1, take its first difference, and use it as the main regressor in the local projection, following the same specification as before. Panels (a) and (e) of Figure 9 show that our results remain robust to this alternative measurement approach.

No system prompt. Recall that we pre-initiate our query with a persona-shaping prompt which directs the LLM into the area of economic research. We now run the same baseline prompt over the whole sample but without the system prompt. Generally, having a system prompt increases the count of conflict cases in most years, everything else equal. However, the business cycle patterns and correlations remain quantitatively unaffected, as can be seem from panels (a) and (e) of Figure 9.

Filtering out keywords. As mentioned earlier in the paper, it is concerning if we obtain our results mechanically. In other words, if the LLM algorithm simply identifies articles that

mention "inflation" or "deflation" explicitly, then our local projection results are not useful. To this end, we manually remove all cases when the LLM identifies price conflict *and* the article includes either "inflation" or "deflation" in the headline or the first paragraph. Panels (b) and (f) of Figure 9 show that our results do not change, either for inflation or the real wage as the dependent variable. In addition, we also remove all articles that contain the words "military" and "war" to address the possibility that our models capture military, as opposed to price, conflict. Results do not change as well.

The Economist. External validity of our results could be questioned if our findings do not extend to other news outlets. Thus, we have also constructed an alternative price conflict measure using the digitized archive of The Economist and keyword counting tools, as explained before. Panels (b) and (f) of Figure 9 show that the impulse responses do not change materially.

5.7.2 Econometric Analysis

Inflation in absolute values. The response of general inflation to price conflict changes, theoretically, may be either positive or negative, depending on the relative force of the real wage demand and price inflation channels. This is also Proposition 3 in Lorenzoni and Werning (2023b): price and wage inflation may have the opposite sign if quantities are at their "natural" level. For our purposes, the direction of the inflation response does not really matter as long as prices move at all. In fact, our conflict measure is inherently sign-invariant. A positive innovation in the PCI implies that conflict is up, but we do not necessarily know whether it is due to e.g. the employer or the employee-led aspirations. Moreover, the origin of a conflict "shock" may come from different sources in different years. Thus, whether some positive change in the PCI is inherently inflationary or deflationary is ex-ante ambiguous. However, what is clear is that any positive change in the PCI must induce prices to move in *some* direction.

To corroborate this point, we show that positive changes in the PCI are also associated with increases in the *absolute value* of future price changes. Panels (c) and (g) of Figure 9 show that our results do not change, both for inflation and the real wage. Thus, a refined restatement of the Rowthorn conjecture could be the following: *conflict is price fluctuations*.

Time sample. It is possible that our results are driven by the early years of the sample, when volatility of price conflict fluctuations was high, or by the post-Volcker era. To address this issue, we run the baseline local projection on the 1919q1-2022q4 and 1890q1-1980q1 sub-samples. Panels (c) and (g) of Figure 9 demonstrate that our results survive time truncation.

No controls. We also consider a local-projection specification without any additional controls, i.e. the vector $\mathbf{X}_t$. Panels (c) and (g) of Figure 9 show that our conclusions are not materially affected.

Lag length. As mentioned before, serial correlation of the dependent variable and of the price conflict measure could pose econometric problems. While we include 4 lags of all regressors in the baseline, we can potentially do more given the length of our time series. We therefore re-run the baseline projection with 8 and 16 lags. Panels (d) and (h) of Figure 9 show that lag selection does not affect our findings.

Alternative specifications. Recall that the baseline treatment variable is constructed by first-differencing the PCI measure. We now consider two alternative approaches to what constitutes the price conflict *treatment*: one-side HP-filtering the index instead of first-differencing it (Ravn and Uhlig, 2002), or considering C_t in levels. Panels (d) and (h) of Figure 9 show that our results are also robust to alternative definitions of the price conflict treatment variable.

Placebo local projections. Finally, we run placebo local projections to gauge the possibility that our results are obtained by statistical chance. Figures A.5 and A.6 in the Appendix report histograms of t-statistics from non-parameteric Monte-Carlo permutations with 1,000 simulations for local projections with either inflation or real wages as the dependent variable at different horizons, h, and the price conflict index, C_t, as the main independent variable. In each regression, the price conflict index is randomly re-assigned with replacement. Each specification includes the usual controls. Standard errors are computed according to Newey and West (1987). Each distribution of t-statistics is centered around zero with a small minority (less than 2%) of cases falling above the rule-of-thumb threshold of —2—.

To conclude, we have run an array of sensitivity checks and robustness tests. None of our tests have materially affected the main result of the paper: price conflict is contemporaneously and dynamically associated with changes in inflation and real wages.

6 Price Conflict and State-Level Inflation

Does price conflict have homogeneous effects across space? To understand if different U.S. regions respond differently to the same change in C_t, we obtain state-level inflation data from Hazell et al. (2021). We consider both tradable and non-tradable sector CPI inflation. Local

projections are now estimated state by state with the same long-horizon and lag specifications as before.

Figure A.4 plots the maps of U.S. states with the color of each state representing the impact of $\tilde{C}_t$ on $Y_{t+4} - Y_{t-1}$, i.e. the horizon is 4 quarters. The top panel, which presents the results for tradable-sector inflation, showcases rich heterogeneity in the responses that are predominantly positive but can range from -0.06 to 0.19 in terms of standard deviations of the dependent variable. About half of the state-level impulse response functions are significant for up to 2 quarters (not shown). The bottom panel of the figure, on the other hand, shows results for non-tradable sector inflation. Here, the estimates are mostly negative and can range from -0.11 to 0.17.

The impacts of price conflict changes are not only heterogeneous across space but they also transmit differentially across tradable and non-tradable sectors. We find that the impacts are statistically and economically significant only for the tradable sector, and not for the non-tradable goods. This finding supports a national price-setting view of conflict-driven price fluctuations. Prices of tradable goods are set by firms homogeneously across space with persistent regional characteristics playing a minute role. To the extent that our conflict measure is national, and disagreement over relative prices is a driver of general inflation, firms react to the dynamic of aggregate conflict by adjusting tradable-good prices while non-tradable inflation is driven by more local forces. Understanding the drivers of regional heterogeneity in the effects of price conflict on local inflation is a fruitful avenue for future research. Moreover, constructing regional, state-level measures of price conflict is an important next step for this research agenda.

7 Conclusion

This paper presents the first comprehensive, macro-historical empirical test of the Rowthorn (1977) conjecture that inflation is driven by aspirational conflict and disagreement over relative prices among economic stakeholders. We apply state-of-the-art tools from generative AI to automatically read the digitized archive of The New York Times and construct a novel, quarterly Price Conflict Index (PCI) spanning the period 1860–2023. We validate the PCI extensively by demonstrating its historical plausibility and auditing thousands of cases with a team of skilled human reviewers.

Overall, our findings provide strong empirical support for the conflict view: positive changes in the PCI are associated with higher inflation, lower real wages, and declines in aggregate economic activity. Furthermore, elevated price conflict is linked to higher inflation expectations among professional forecasters and central bankers, suggesting a potentially

important channel for inflation propagation through the interaction of expectations, conflict, and disagreement.

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Tables and Figures

Table 1: Generative AI Prompts Used to Build Price Conflict Indices

Category	Prompt
System	`You are a professor of economic history at a top US research university. You study disagreement over prices or wages between stakeholders.`
Main	`Does the excerpt mention disagreement or conflict between stakeholders over prices or wages in the United States? If it does, please explain why in one sentence. If it does not or if the text contains insufficient information, please only reply with 'No'.`
Intensity	`The excerpt possibly mentions disagreement or conflict between stakeholders over prices or wages in the United States. How serious is this disagreement? Rate from 1 to 10, where 1 is least serious and 10 is most serious. Reply only with a number. Reply with 0 if there is insufficient information.`
Topical	`The excerpt possibly mentions disagreement or conflict between stakeholders over prices or wages in the United States. Which of the following categories fits best? 1. Disagreement over wages, 2. Disagreement over prices of goods or services, 3. Disagreement over real estate prices, 4. Disagreement over central bank interest rates, 5. Disagreement over energy prices, 6. Disagreement over tariffs, 7. Any other topic or insufficient information. Reply only with the associated number '1', '2', '3', '4', '5', '6', or '7'.`

Notes: This table lists the GenAI prompts used to construct the various indices of price conflict. The System prompt is applied before any of the other three prompts. The Main prompt is used to build the baseline price conflict index (PCI), C_t. The Intensity prompt is used to build the index of price conflict intensity, $\mathcal{I}_t$. The Topical prompt is used to build k topical measures of price conflict, $\mathcal{T}_{k,t}$.

Table 2: Human Audit of the Price Conflict Index

Average Accuracy			
Number of Auditors	Number of Articles Audited	Type I Error	Type II Error
7	4,000	6.2%	2.5%
Accuracy Per Decade			
Decade	Number of Articles Audited	Type I Error	Type II Error
1860	235	10.8%	7.1%
1870	235	8.7%	4.6%
1880	235	7.3%	2.4%
1890	235	7.6%	2.2%
1900	235	6.8%	2.7%
1910	235	5.5%	3.6%
1920	235	4.9%	1.3%
1930	235	5.8%	2.5%
1940	235	5.4%	1.7%
1950	235	6.1%	2.3%
1960	235	5.2%	2.8%
1970	235	5.3%	2.1%
1980	235	3.9%	0.9%
1990	235	5.7%	1.6%
2000	235	6.0%	1.7%
2010	235	4.4%	1.2%
2020	235	5.1%	2.4%

Notes: This table summarizes the outcome of the human audit of the GenAI model's responses to the system and main prompts, which are used to build the baseline price conflict index. The prompts are listed in Table 1. The top panel reports the average Type I and Type II errors across all years. The bottom panels reports the same accuracy metrics per each decade in the sample. Type I (II) error is defined as the share of cases that the GenAI model marked as (not) mentioning price conflict but which the human auditors judged to be wrong.

Table 3: Price Conflict, Inflation Expectations, and Disagreement

	Panel (A)			
	Clevelend Fed		Michigan Survey	
	Expectations in t	Expectations in t+4	Expectations in t	Expectations in t+4
	(1)	(2)	(3)	(4)
Price Conflict Index	1.066	0.673	-0.0593	-0.160
	(0.140)	(0.136)	(0.0475)	(0.0925)
Inflation in t-1	1.743	1.761	0.993	0.504
	(0.185)	(0.253)	(0.0777)	(0.191)
GDP Growth in t-1	0.737	0.640	0.0580	-0.0811
	(0.234)	(0.215)	(0.0693)	(0.125)
Constant	1.151	0.715	-0.326	-0.451
	(0.146)	(0.145)	(0.0505)	(0.0802)
Observations	164	160	164	160
R^2	0.693	0.557	0.513	0.089
	Panel (B)			
	Survey of Professional Forecasters		Disagreement over Inflation Expectations	
	Disagreement in t	Disagreement in t+4	Disagreement in t	Disagreement in t+4
	(5)	(6)	(7)	(8)
Price Conflict Index	0.874	0.476	0.230	-0.154
	(0.113)	(0.114)	(0.153)	(0.220)
Inflation in t-1	1.753	1.730	1.794	1.528
	(0.178)	(0.223)	(0.234)	(0.392)
GDP Growth in t-1	0.440	0.427	-0.866	-0.477
	(0.171)	(0.156)	(0.223)	(0.249)
Constant	0.880	0.447	0.0250	-0.336
	(0.120)	(0.129)	(0.149)	(0.190)
Observations	164	160	164	160
R^2	0.683	0.549	0.470	0.198

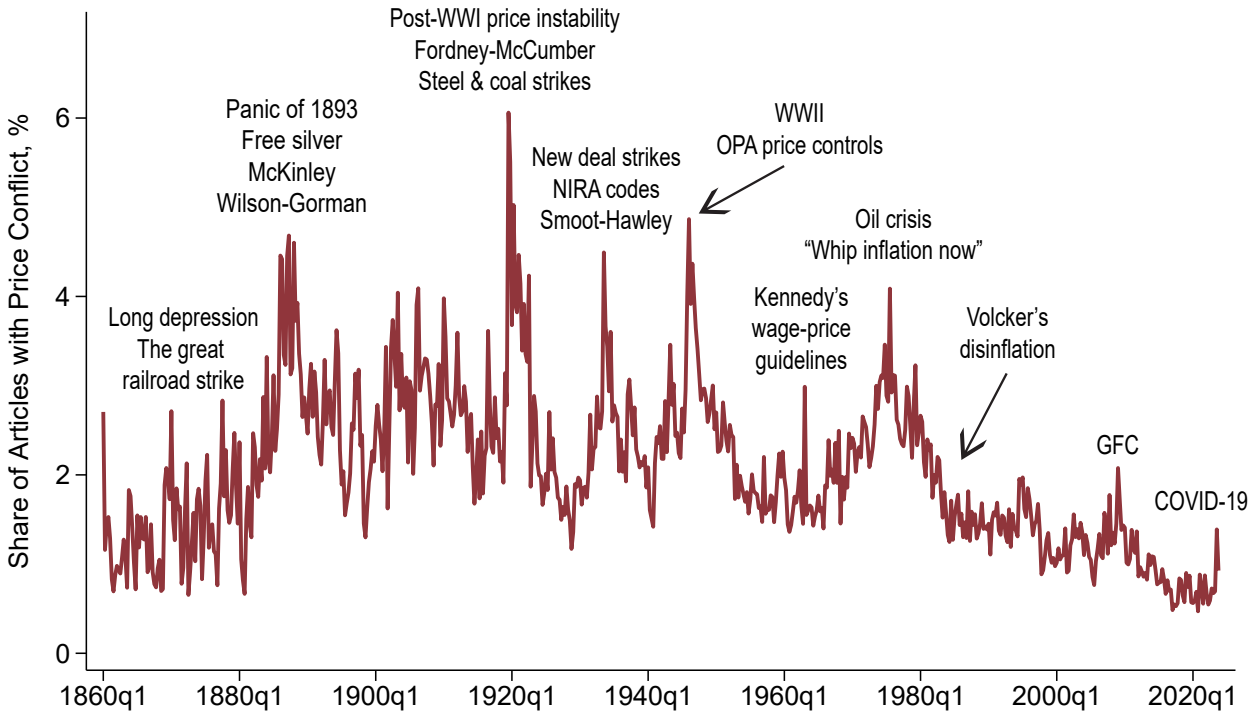
Notes: This table presents results from linear regressions of various measures of inflation expectations or disagreement over expectations as the dependent variable, and the baseline price conflict index, C_t, as the main independent variable. The regression sample is 1982q1-2022q4. Table A.1 describes the data and sources. Standard errors are robust to finite-sample correction of clustered/robust covariance estimates.

Table 4: Price Conflict and Inflation Disasters

Probit model marginal effects	Inflation Disaster in t (1)	Inflation Disaster in t+4 (2)	Inflation Disaster in t+8 (3)	Inflation Disaster in t (4)	Inflation Disaster in t+4 (5)	Inflation Disaster in t+8 (6)
Price Conflict Index	0.214	0.171	0.125	0.079	0.089	0.086
	(0.025)	(0.022)	(0.021)	(0.036)	(0.026)	(0.023)
Price Change in t-1				0.774	0.226	0.075
				(0.086)	(0.032)	(0.024)
GDP Growth in t-1				0.046	0.002	(0.024)
				(0.037)	(0.023)	(0.021)
Observations	528	524	520	527	523	519

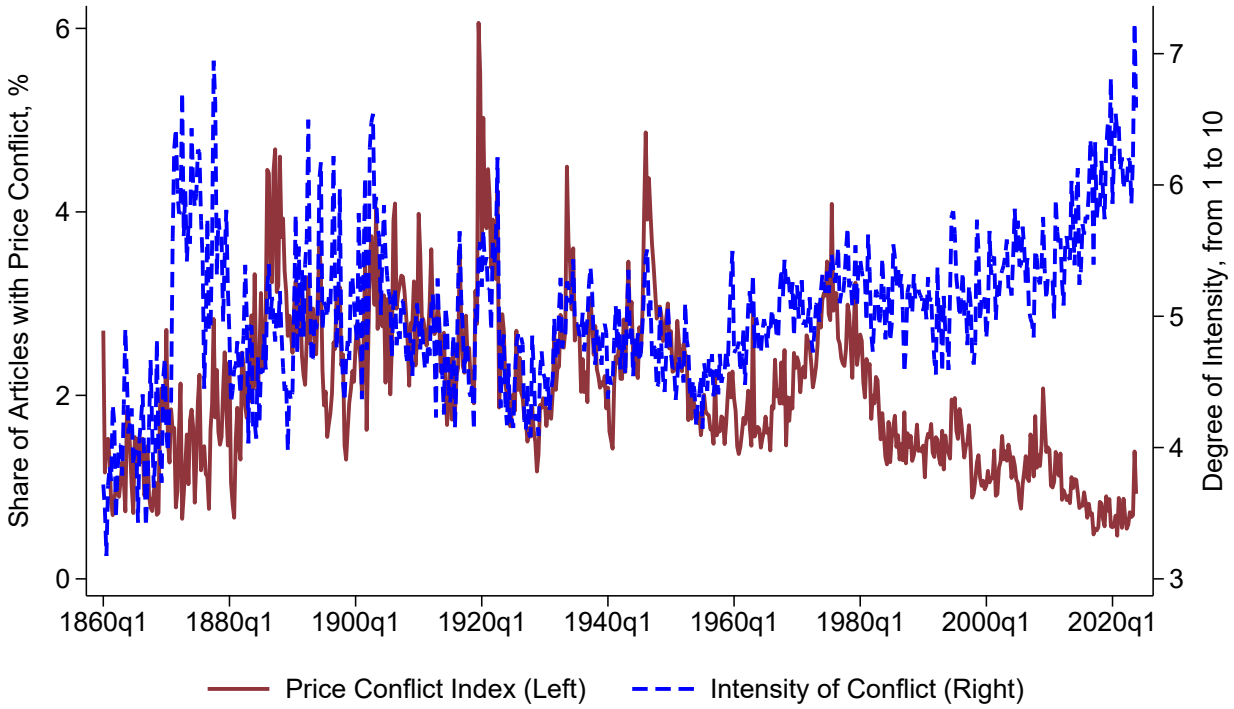
Notes: This table reports marginal effects from probit regressions of an inflation disaster indicator as the dependent variable and the price conflict index, C_t, as the main independent variable. The dependent variable takes the value of unity if the absolute value of the price change is at least 4%. Standard errors are robust to homoskedasticity.

Figure 1: The Price Conflict Index



Notes: The baseline price conflict index (PCI), C_t. Data can be found at www.priceconflict.com. The prompts used to construct this measure are listed in Table 1.

Figure 2: The Extensive and Intensive Margins of Price Conflict



Notes: The baseline price conflict index (PCI), C_t, and the index of price conflict intensity, $\mathcal{I}_t$, that gauges the intensive margin of conflict and disagreement over prices and wages. The prompts used to construct these measures are listed in Table 1.

Figure 3: Word Clouds of the Topical Indices of Price Conflict

(a) Wages



(b) Prices of Goods or Services



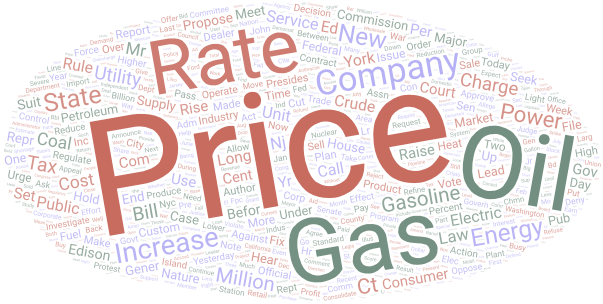
(c) Real Estate Prices



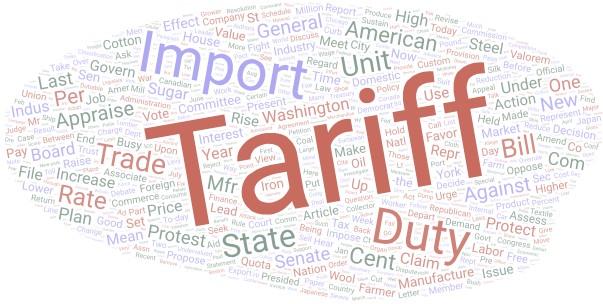
(d) Interest Rates



(e) Energy



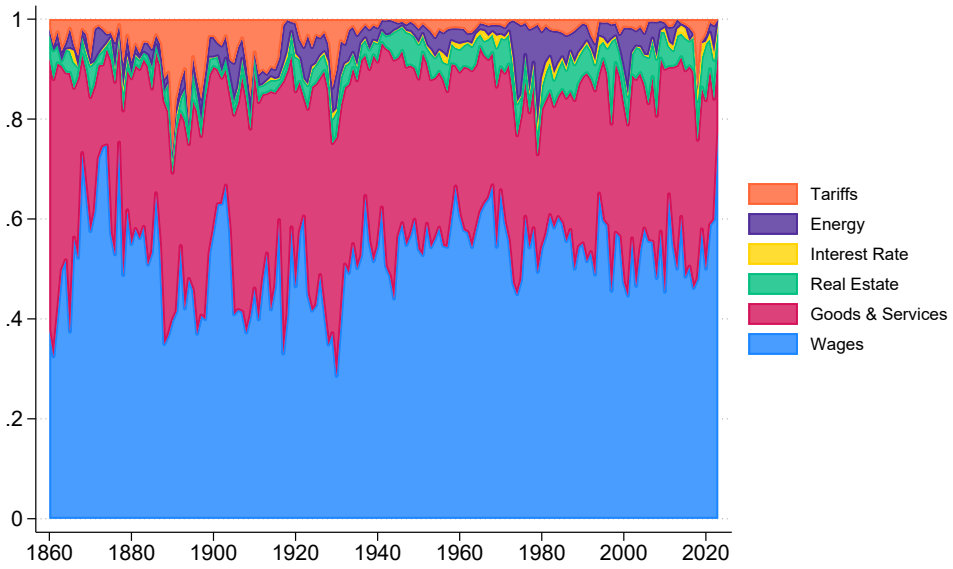
(f) Tariffs



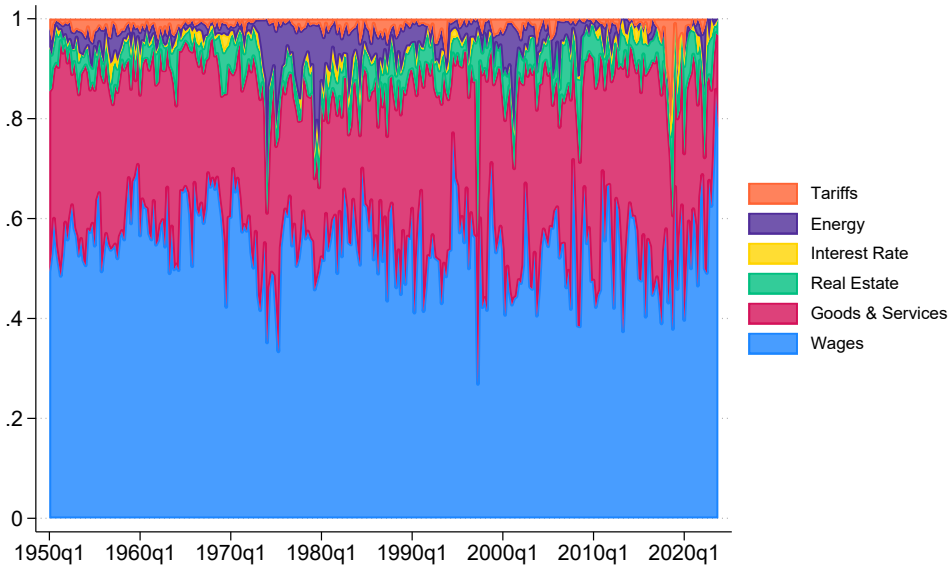
Notes: This figure presents word clouds of the six topical indices of conflict on different types of prices. The topical prompt is listed in Table 1.

Figure 4: Time-Series Decomposition of the Topical Indices of Price Conflict

(a) Annual over 1860-2023



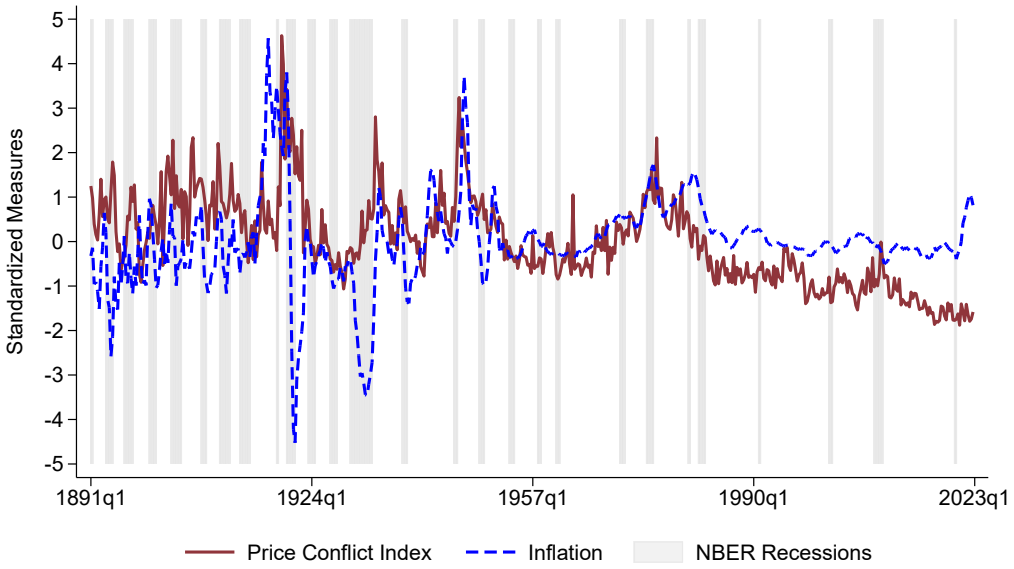
(b) Quarterly over 1950q1-2023q4



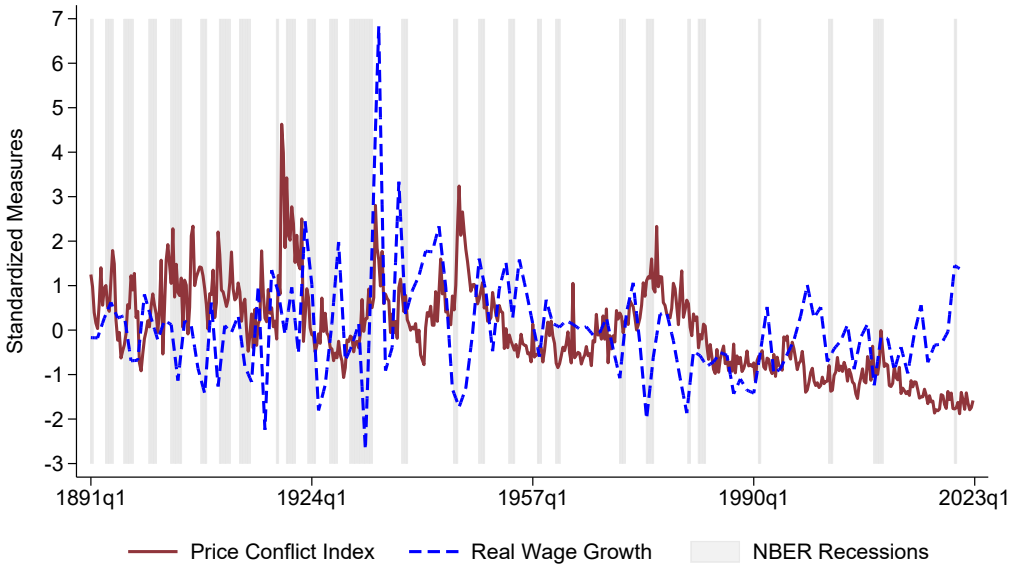
Notes: Historical decomposition of the price conflict index by topic. The topical prompt is listed in Table 1.

Figure 5: Price Conflict and Price Changes

(a) Inflation



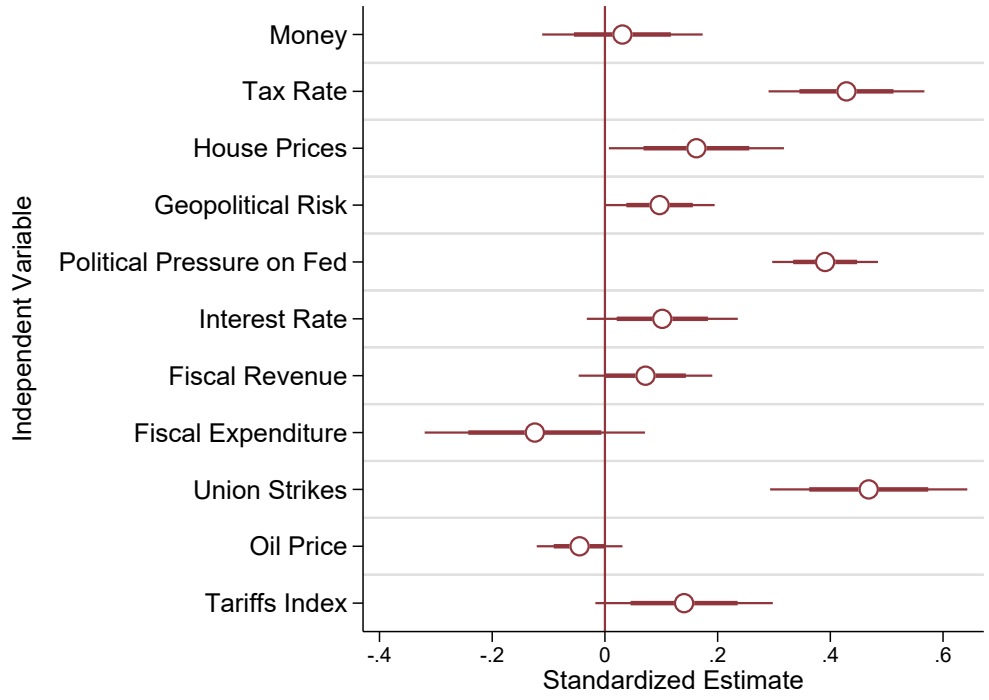
(b) Real Wages



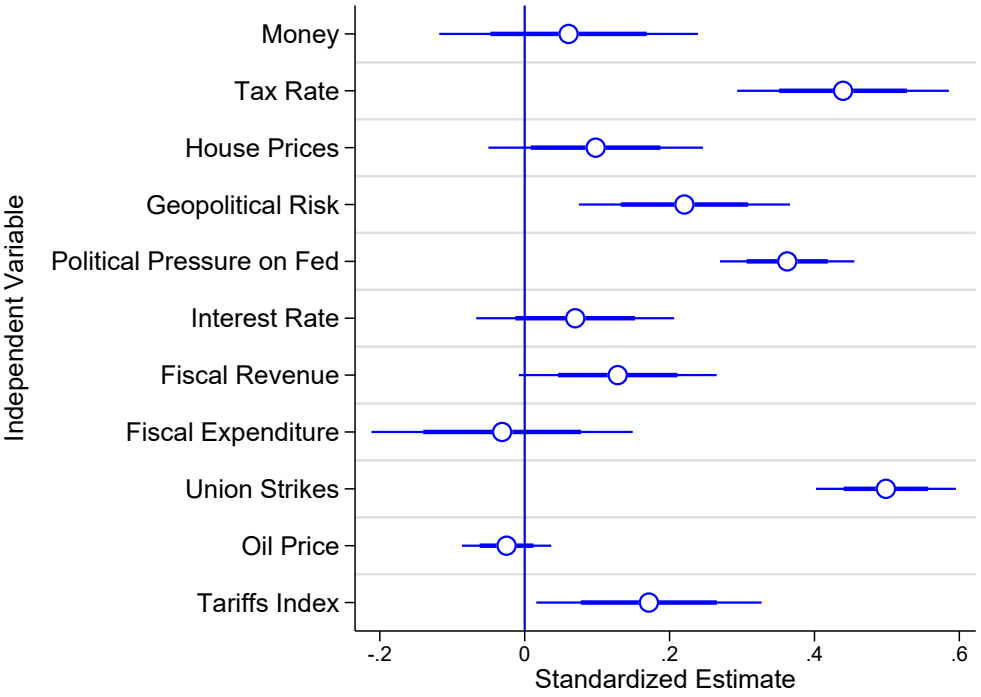
Notes: The baseline price conflict index, C_t, year-on-year change in the U.S. GDP implicit price deflator (top panel), and year-on-year real wage growth (bottom panel). All variables have been standardized. Shaded areas are NBER recessions.

Figure 6: Understanding the Drivers of the Price Conflict Index

(a) One-Quarter Ahead Forecast

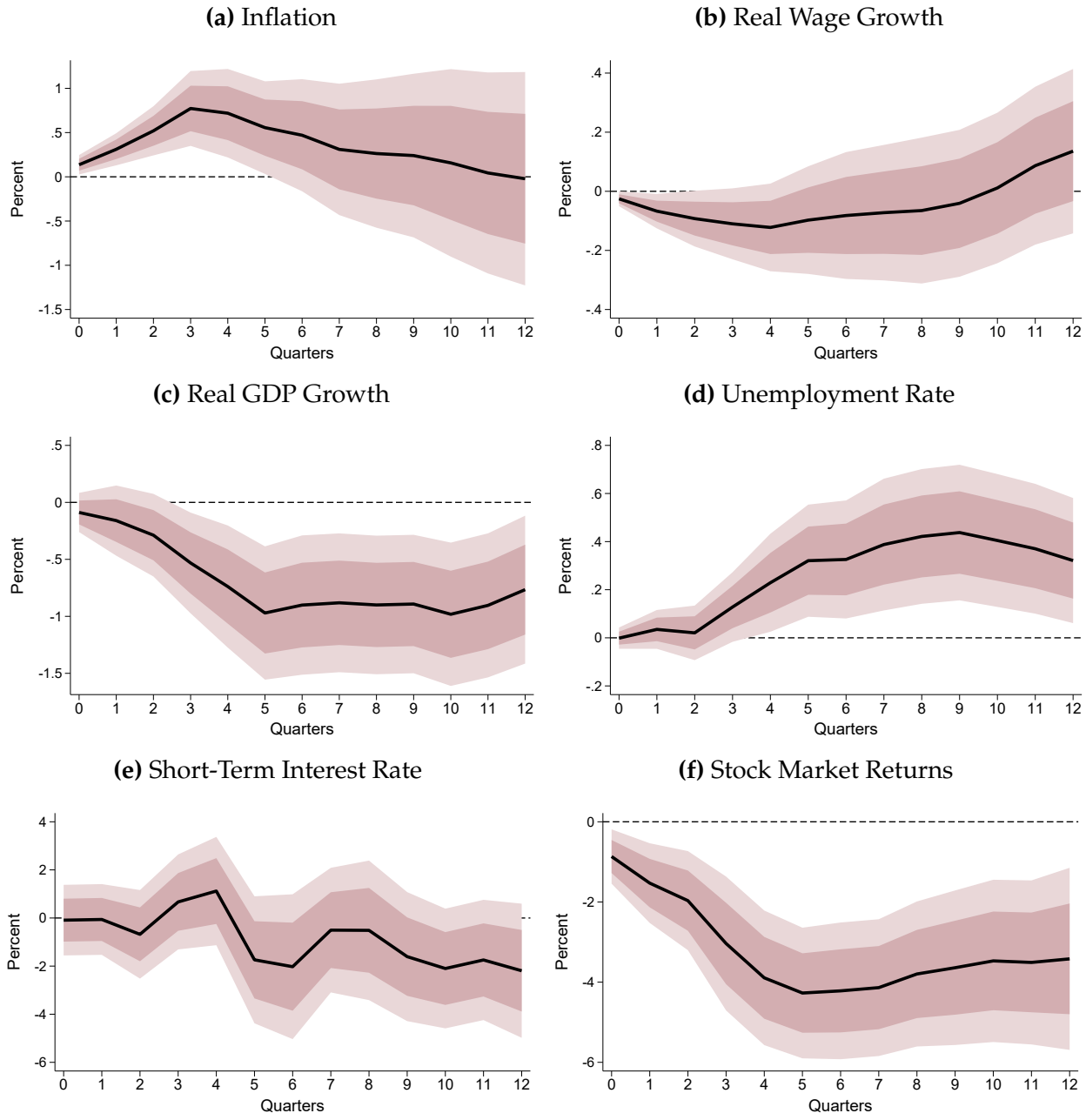


(b) Four-Quarter Ahead Forecast



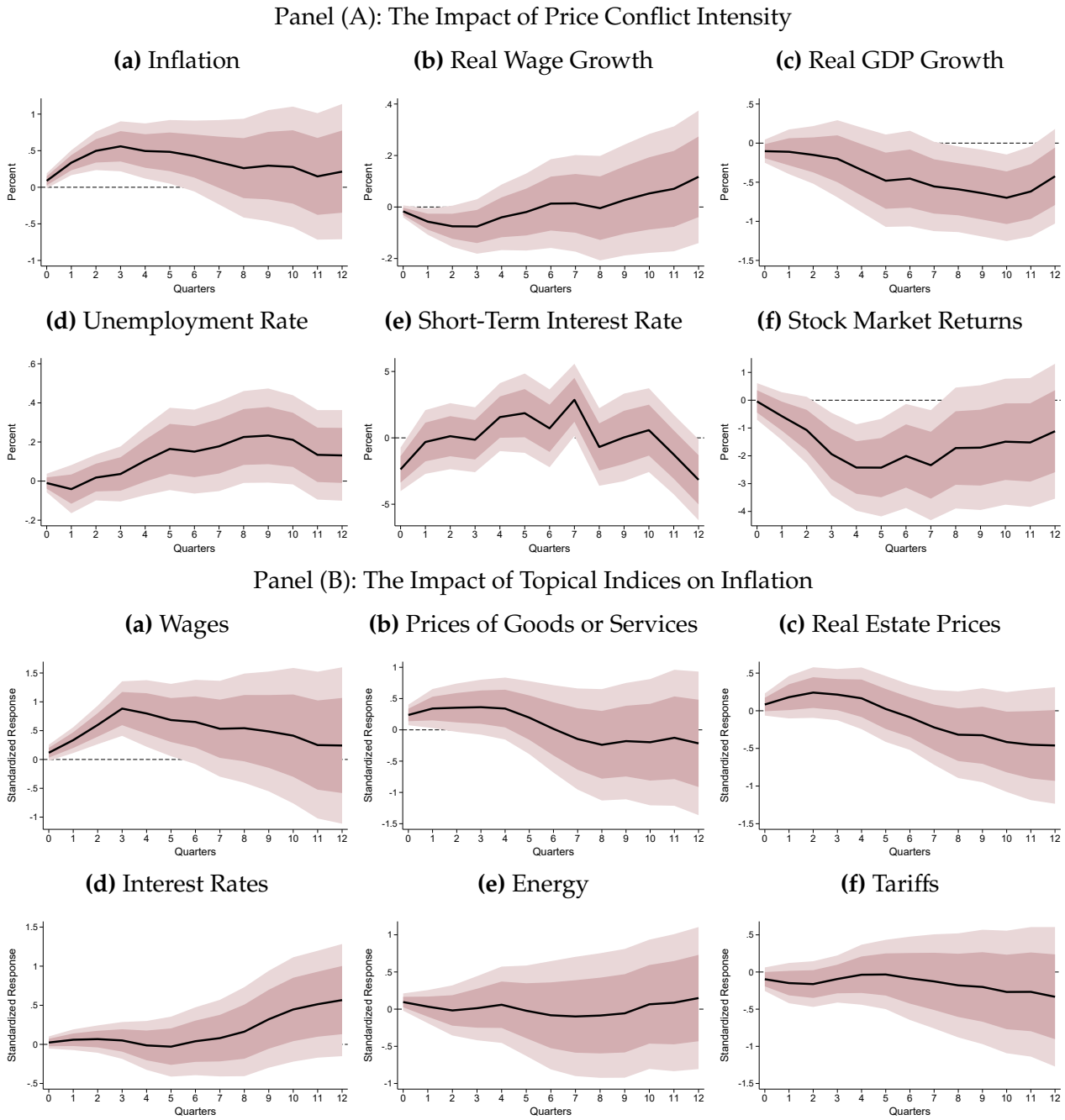
Notes: Estimates from linear regressions where one- (top panel) and four- (bottom panel) quarter ahead price conflict index, C_{t+h}, is the dependent variable and explanatory factors are the independent variable. Explanatory factors are added one at a time and are represented in each row. Estimates are standardized. Heteroskedasticity and autocorrelation consistent 90% and 95% confidence intervals are computed according to Newey and West (1987).

Figure 7: Macroeconomic Effects of the Baseline Price Conflict Index



Notes: Results from local projections of macroeconomic aggregates on the baseline price conflict index (PCI), C_t. The main independent variable is the first-difference of C_t. All regressions also include four lags of the dependent and independent variables, as well as four lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate. Shaded areas are 68% and 90% confidence bands that are heteroskedasticity and autocorrelation consistent and computed according to Newey and West (1987).

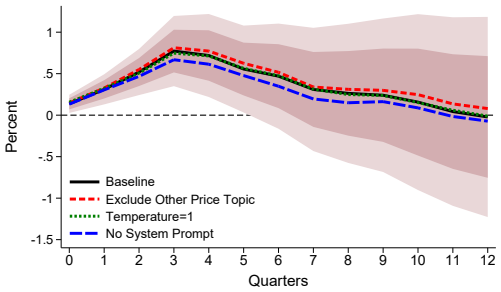
Figure 8: Macroeconomic Effects of Additional Indices of Price Conflict



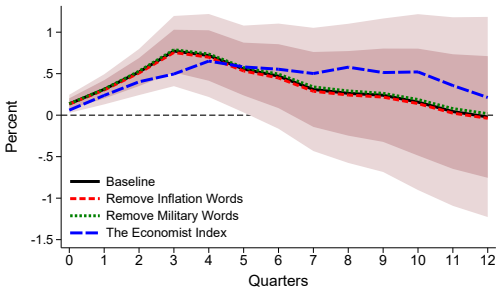
Notes: Panel (A) reports results from local projections of macroeconomic aggregates on the index of price conflict intensity, $\mathcal{I}_t$. The main independent variable is the first-difference of $\mathcal{I}_t$. Panel (B) reports results from local projections of the k topical indices of conflict, $\mathcal{T}_{k,t}$. The dependent variable is inflation, measured as the year-on-year change in the U.S. GDP implicit price deflator. All regressions in both panels also include four lags of the dependent and independent variables, as well as four lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate. Shaded areas are 68% and 90% confidence bands that are heteroskedasticity and autocorrelation consistent and computed according to Newey and West (1987).

Figure 9: Robustness of the Effect of Price Conflict on Inflation and Real Wages

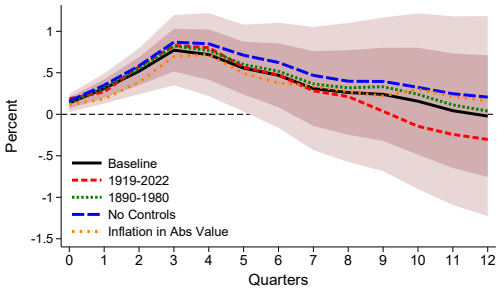
(a) Inflation - GenAI Sensitivity I



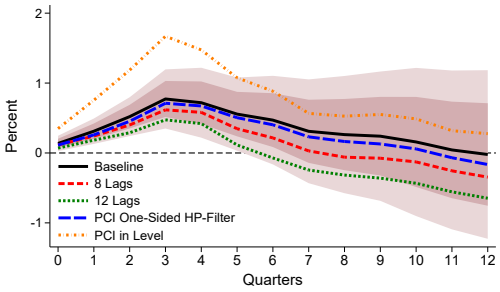
(b) Inflation - GenAI Sensitivity II



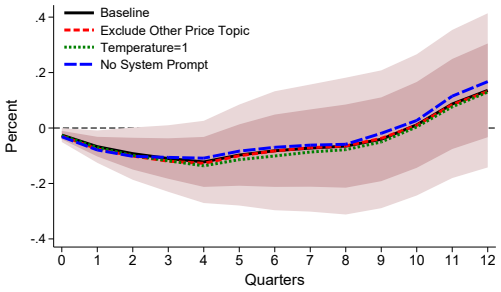
(c) Inflation - Econometric Sensitivity I



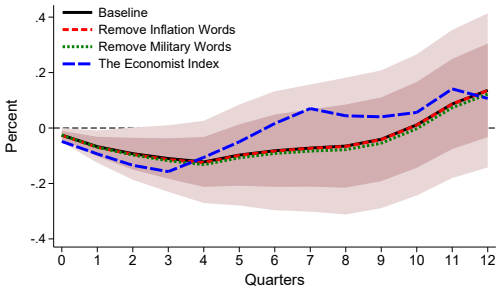
(d) Inflation - Econometric Sensitivity II



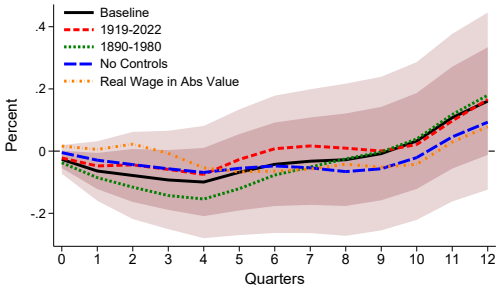
(e) Real Wage - GenAI Sensitivity I



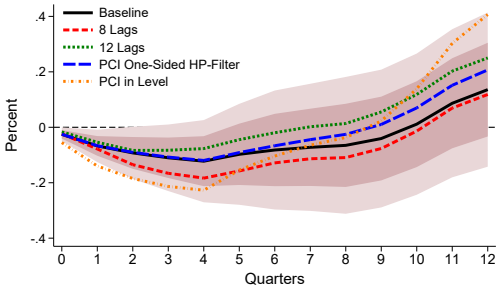
(f) Real Wage - GenAI Sensitivity II



(g) Real Wage - Econometric Sensitivity I



(h) Real Wage - Econometric Sensitivity II



Notes: In the top two rows, the dependent variable is inflation, measured as the year-on-year change in the U.S. GDP implicit price deflator. In the bottom two rows, the dependent variable is real wage growth. All regressions also include lags of the dependent and independent variables, as well as lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate. Shaded areas are 68% and 90% confidence bands that are heteroskedasticity and autocorrelation consistent and computed according to Newey and West (1987).

Online Appendix for "Measuring Conflict Inflation"

Rustam Jamilov

July 2025

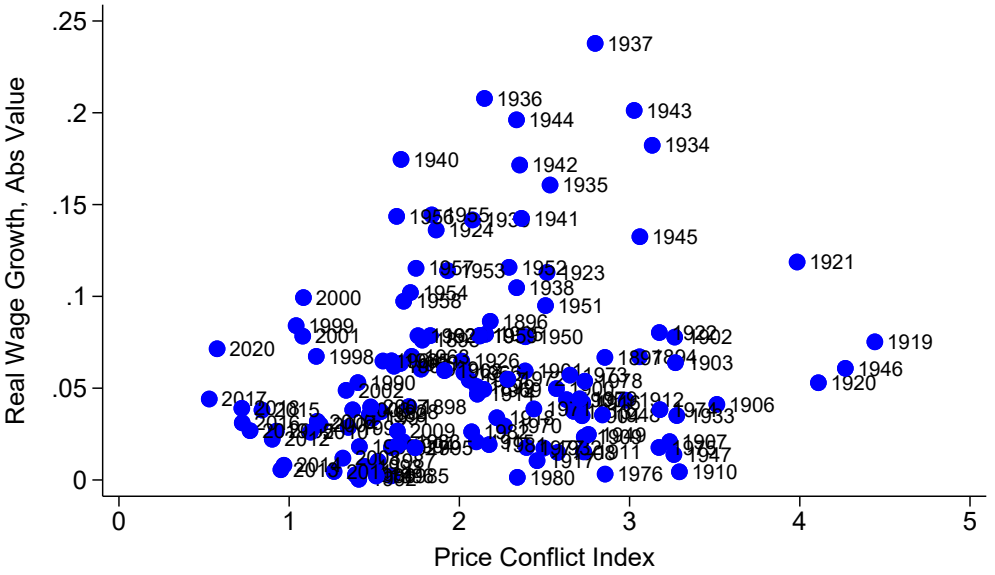
A Additional Figures and Tables

Figure A.1: The Price Conflict Index and the Absolute Value of Price Changes

(a) Inflation

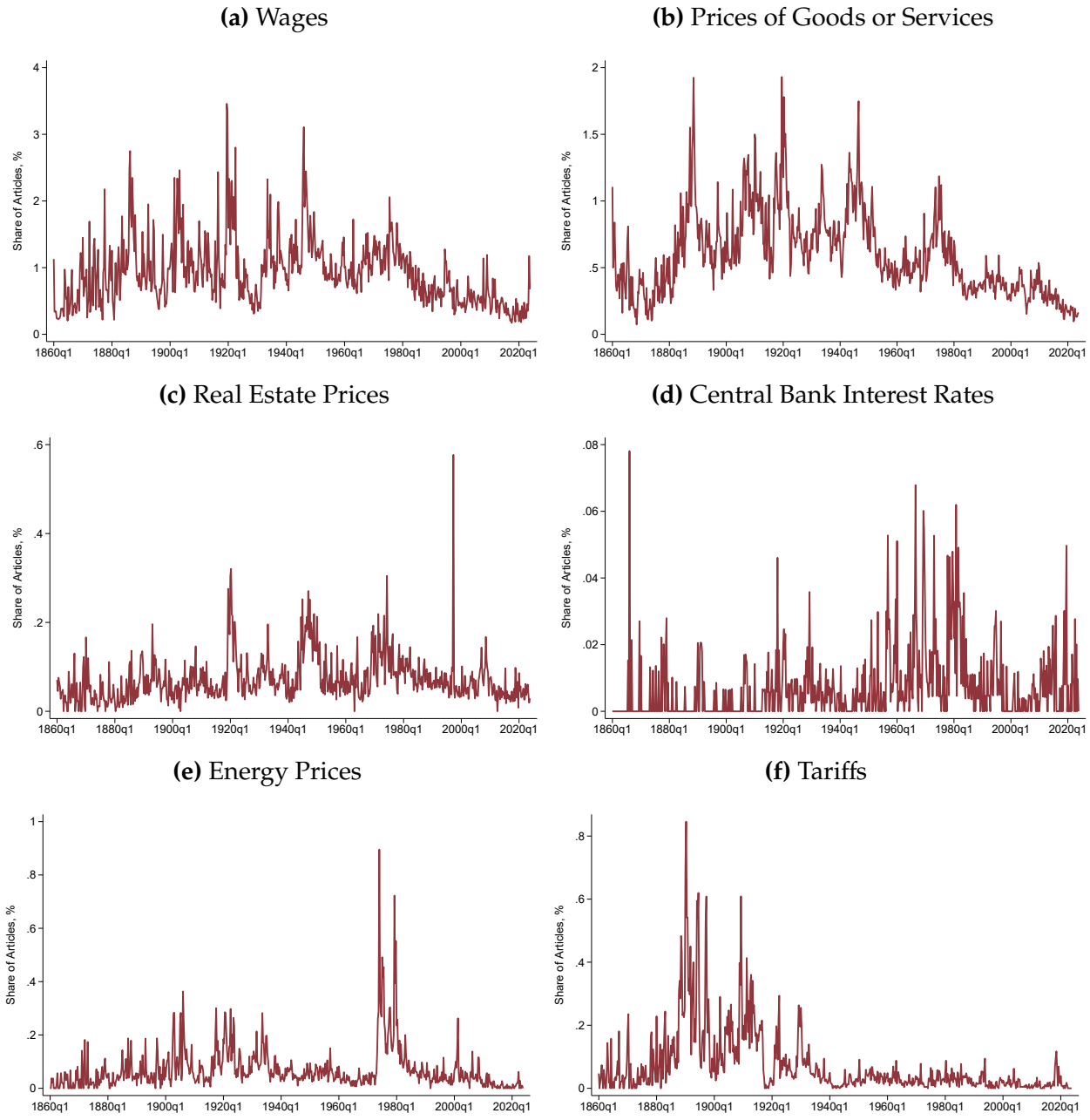


(b) Real Wages



Notes: Yearly scatterplots of the baseline price conflict index, C_t, and inflation (top panel) and real wage growth (bottom panel)—both in absolute value.

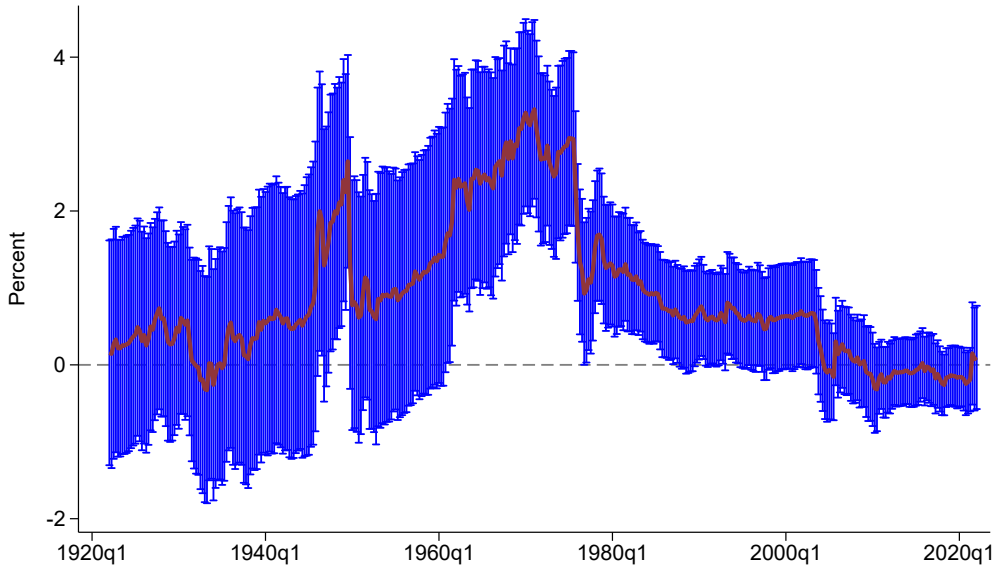
Figure A.2: Topical Indices of Price Conflict



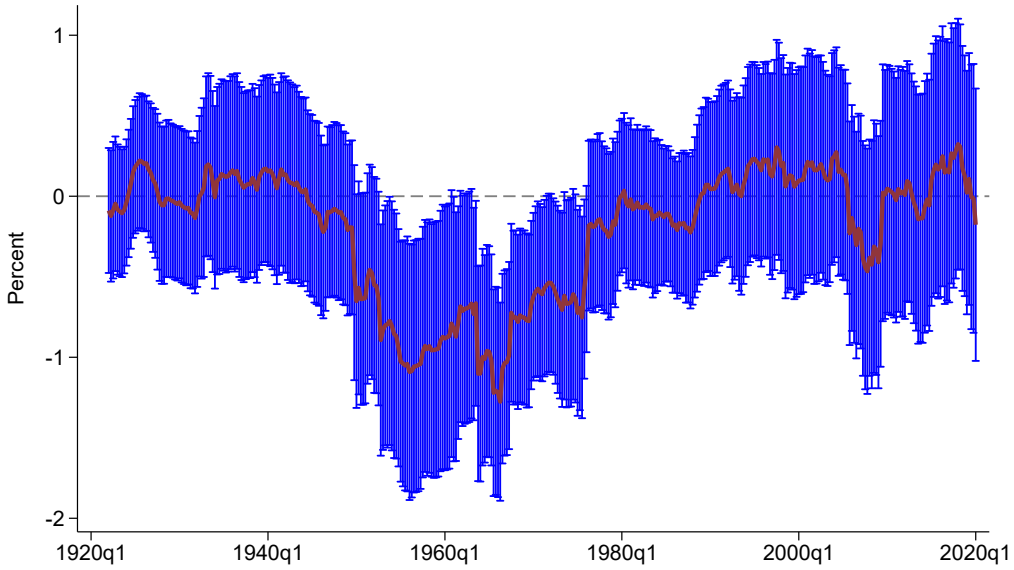
Notes: Time-series decomposition of the price conflict index by price topic. The Topical prompt used to construct these measures is listed in Table 1 of main text.

Figure A.3: Time-Varying Effects of the Price Conflict Index on Inflation and Wages

(a) Inflation



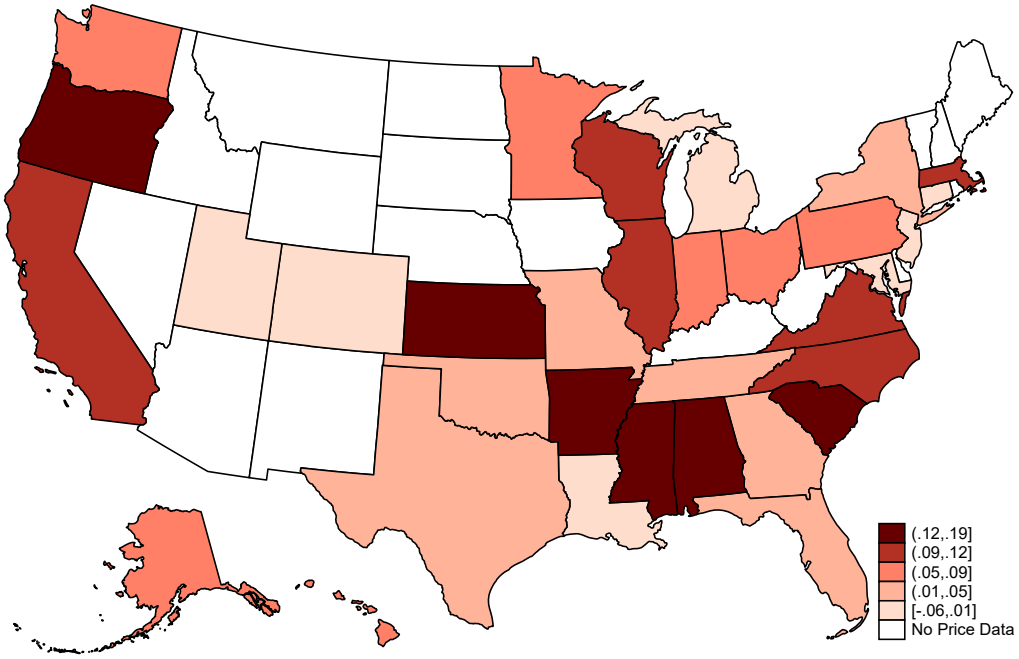
(b) Real Wage



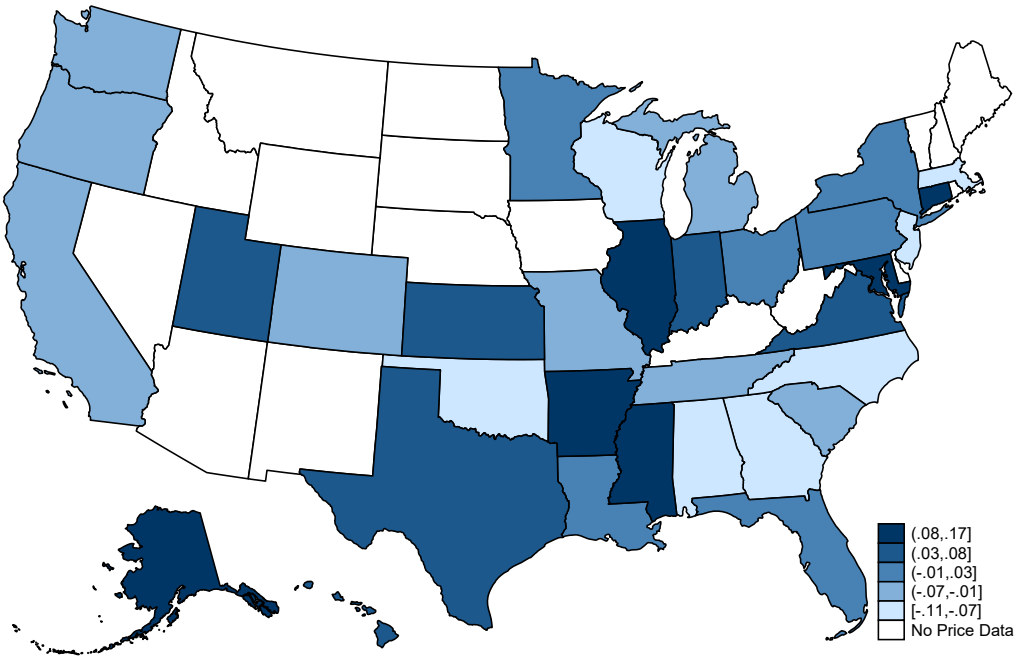
Notes: Time-varying effects of the price conflict index, C_t, on inflation and real wages. Each panel shows point estimates and confidence intervals from rolling regressions with 30-year (120-quarter) windows. C_t is the main independent variable and either the four-quarter ahead inflation or real wage growth is the main dependent variable. The regressions also include four lags of the dependent and independent variables, as well as four lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate. Heteroskedasticity and autocorrelation consistent 90% confidence intervals are computed according to Newey and West (1987).

Figure A.4: The Impact of Price Conflict on Regional Inflation

(a) Tradable Inflation

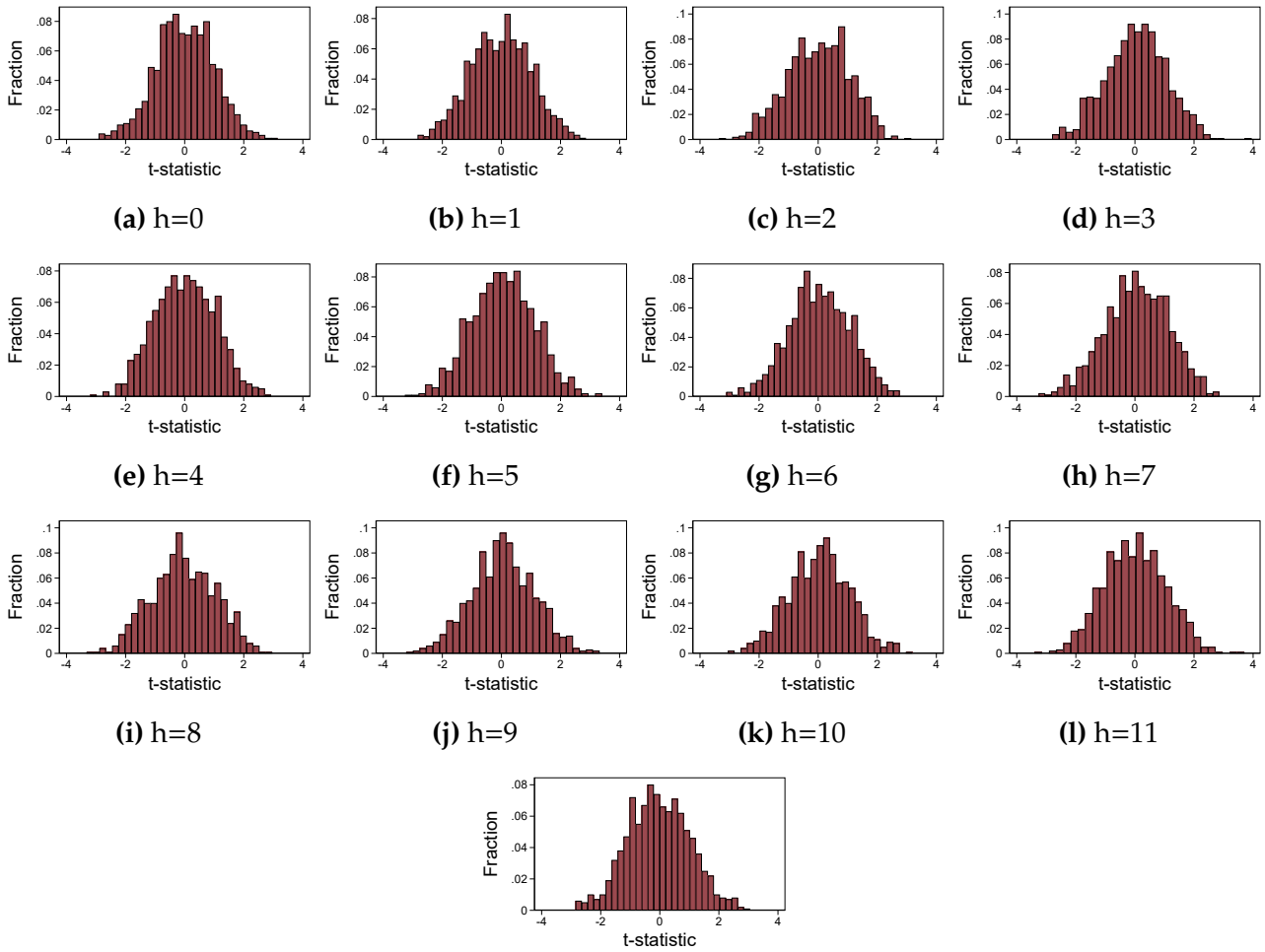


(b) Non-Tradable Inflation



Notes: Results from local projections of regional inflation on the baseline price conflict index (PCI), C_t. The dependent variables are four-quarter ahead state-level tradable and non-tradable CPI inflation from Hazell et al. (2021). The main independent variable is the first-difference of C_t. All regressions also include four lags of the dependent and independent variables, as well as four lags of real GDP growth, the unemployment rate, stock market returns, and the short-term interest rate.

Figure A.5: Placebo Local Projections for Inflation at Different Horizons



(a) h=0 **(b)** h=1 **(c)** h=2 **(d)** h=3

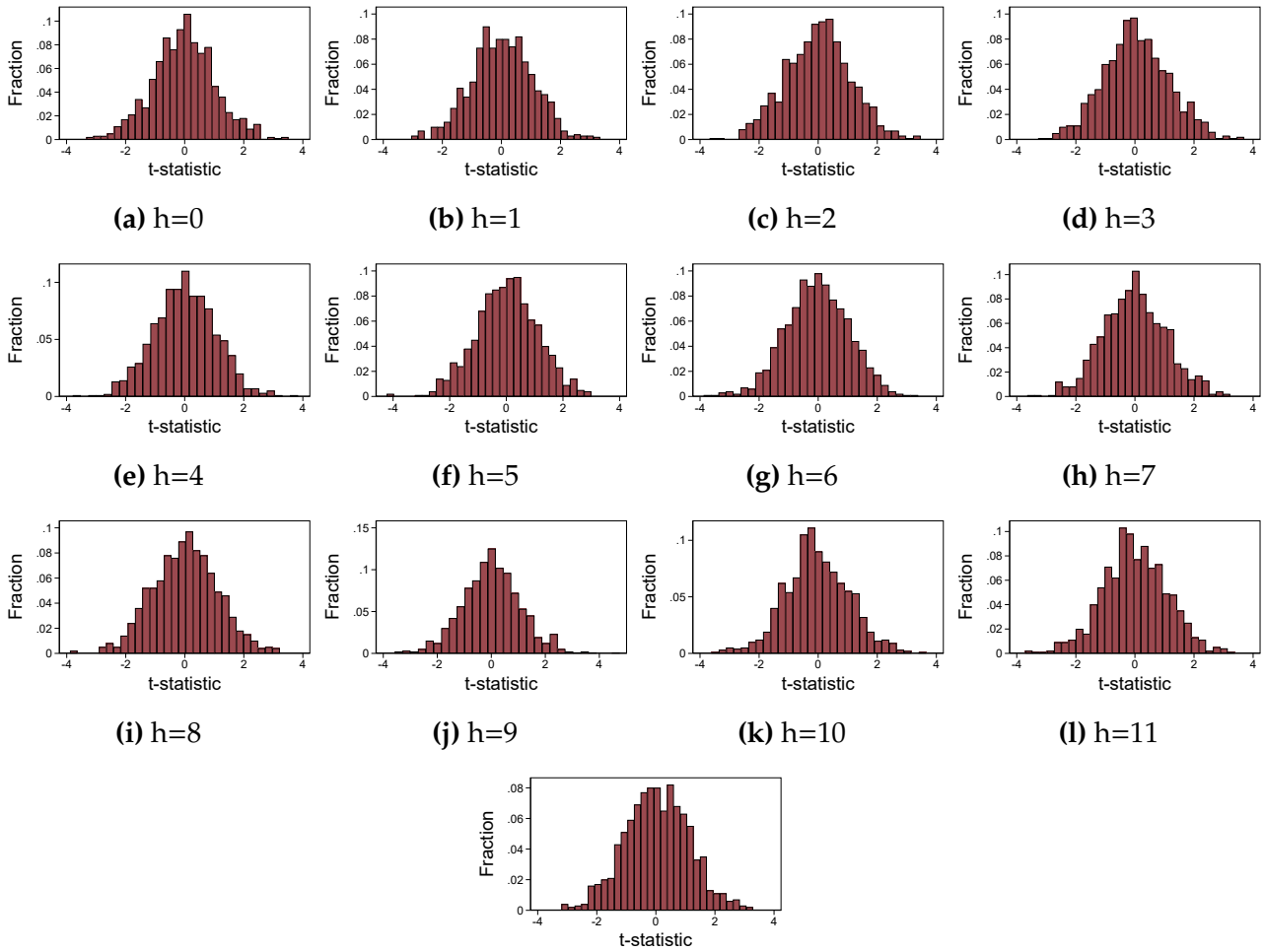
(e) h=4 **(f)** h=5 **(g)** h=6 **(h)** h=7

(i) h=8 **(j)** h=9 **(k)** h=10 **(l)** h=11

(m) h=12

Notes: Each panel reports histograms of t-statistics from non-parameteric Monte-Carlo permutations with 1,000 simulations for local projections with inflation as the dependent variable at different horizons, h, and the price conflict index, C_t, as the main independent variable. In each regression, the price conflict index is randomly re-assigned with replacement. Each specification includes the usual controls. Standard errors are computed according to Newey and West (1987).

Figure A.6: Placebo Local Projections for the Real Wage at Different Horizons



(a) h=0 **(b)** h=1 **(c)** h=2 **(d)** h=3

(e) h=4 **(f)** h=5 **(g)** h=6 **(h)** h=7

(i) h=8 **(j)** h=9 **(k)** h=10 **(l)** h=11

(m) h=12

Notes: Each panel reports histograms of t-statistics from non-parameteric Monte-Carlo permutations with 1,000 simulations for local projections with the real wage as the dependent variable at different horizons, h, and the price conflict index, C_t, as the main independent variable. In each regression, the price conflict index is randomly re-assigned with replacement. Each specification includes the usual controls. Standard errors are computed according to Newey and West (1987).

Table A.1: Data Description

Variable	Sample	Source
Baseline measure of price conflict	1860q1 - 2023q4	The New York Times, own calculations
Measure of price conflict intensity	1860q1 - 2023q4	The New York Times, own calculations
Topical measures of price conflict (six in total)	1860q1 - 2023q4	The New York Times, own calculations
Dictionary-based measure of price conflict based on The Economist	1890q1 - 2020q4	The Economist, own caculations
GDP implicit price deflator	1890q1 - 2022q4	Ramey and Zubairy (2018) for 1890-2012 and FRED for 2012-2022
Real GDP	1890q1 - 2022q4	Ramey and Zubairy (2018) for 1890-2012 and FRED for 2012-2022
Unemployment rate	1890q1 - 2022q4	Ramey and Zubairy (2018) for 1890-2012 and FRED for 2012-2022
S&P500 index	1890q1 - 2022q4	Welch and Goyal (2007) and Goyal's website
T-bill interest rate	1890q1 - 2022q4	Welch and Goyal (2007) and Goyal's website
Households' inflation expectations	1978q1 - 2024q4	University of Michigan's survey of consumers
Forecasters' inflation expectations	1981q3 - 2024q4	Survey of professional forecasters (SPF), Philadelphia Fed
Cleveland Fed's inflation expectations	1982q1 - 2024q4	Cleveland Fed
Disagreement over inflation expectations	1978q1 - 2024q4	Fofana et al. (2024)
Inflation disaster (defined as inflation or deflation of above 4%)	1890q1 - 2022q4	Own calculations
Monetary base	1890q1 - 2020q4	Jordà et al. (2019)
Federal government revenue	1890q1 - 2020q4	Jordà et al. (2019)
Federal government expenditure	1890q1 - 2020q4	Jordà et al. (2019)
Nominal wage	1890q1 - 2020q4	Jordà et al. (2019)
House prices	1890q1 - 2020q4	Jordà et al. (2019)
Geopolitical risk	1900q1 - 2024q2	Caldara and Iacoviello (2022) and Iacoviello's website
Political pressure on the Fed	1933q1 - 2016q4	Drechsel (2024) and Drechsel's website
Tariffs intensity index	1890q1 - 1961q4	Irwin (2010)
Workers involved in strikes, as a percentage of total employment	1881q1 - 1981q4	Historical statistics of the United States
Oil price (WTI)	1986q1 - 2024q4	FRED (DCOILWTICO)
Individual income tax rate, highest bracket	1913q1 - 2018q4	FRED (IITTRHB)

Notes: This table provides details on all data used in the paper, including infomration on the coverage and sources.

Table A.2: Results from Granger Causality Tests

		Wald Test P-values			
Dependent Variable	Excluded Regressor	Baseline	Exclude Other Price Topic	Temperature=1	No System Prompt
Inflation	PCI	0.044	0.038	0.062	0.050
PCI	Inflation	0.915	0.880	0.938	0.592
		Remove Inflation Words	Remove Military Words	1919-2022	1890-1980
Inflation	PCI	0.057	0.038	0.005	0.045
PCI	Inflation	0.900	0.947	0.301	0.932
		No Controls	Inflation in Abs Value	8 Lags	12 Lags
Inflation	PCI	0.068	0.007	0.005	0.076
PCI	Inflation	0.916	0.574	0.309	0.348
		PCI One-Sided HP Filter	PCI in Level		
Inflation	PCI	0.045	0.049		
PCI	Inflation	0.826	0.872		

Notes: This table reports p-values from Granger causality tests for various models and specifications. The underlying VAR system includes inflation, the first-difference of the price conflict index (PCI), C_t, as well as real GDP growth, the unemployment rate, stock returns, and the short-term interest rate. Unless otherwise specified, four lags of all endogenous variables are included. The null hypothesis is that the excluded regressor does not Granger-cause the dependent variable.

Table A.3: Topical Price Conflict Indices and Cleveland Fed's Inflation Expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Wages	0.772					
	(0.156)					
Goods and Services		1.118				
		(0.199)				
Real Estate			0.169			
			(0.299)			
Interest Rates				0.0336		
				(0.0794)		
Energy					0.707	
					(0.259)	
Tariffs						0.600
						(0.359)
Inflation in t-1	1.832	2.187	2.131	2.162	1.806	2.133
	(0.255)	(0.236)	(0.346)	(0.340)	(0.325)	(0.314)
GDP Growth in t-1	0.673	0.780	0.597	0.587	0.566	0.559
	(0.225)	(0.274)	(0.248)	(0.240)	(0.218)	(0.232)
Constant	0.683	1.171	0.118	0.0688	0.350	0.359
	(0.130)	(0.200)	(0.135)	(0.0663)	(0.123)	(0.180)
Observations	164	164	164	164	164	164
R^2	0.608	0.608	0.510	0.487	0.570	0.502

Notes: This table presents results from linear regressions of the Cleveland Fed's index of inflation expectations as the dependent variable, and the topical indices of conflict, $\mathcal{T}_{k,t}$, as the main independent variable. The regression sample is 1982q1-2022q4. Table A.1 describes the data and sources. Standard errors are robust to finite-sample correction of clustered/robust covariance estimates.

Table A.4: Topical Price Conflict Indices and Professional Forecasters' Inflation Expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Wages	0.623					
	(0.123)					
Goods and Services		0.872				
		(0.164)				
Real Estate			0.140			
			(0.277)			
Interest Rates				0.0690		
				(0.0682)		
Energy					0.489	
					(0.228)	
Tariffs						0.654
						(0.337)
Inflation in t-1	1.831	2.117	2.071	2.069	1.853	2.059
	(0.243)	(0.225)	(0.317)	(0.303)	(0.310)	(0.283)
GDP Growth in t-1	0.386	0.467	0.326	0.315	0.303	0.287
	(0.170)	(0.204)	(0.199)	(0.192)	(0.173)	(0.180)
Constant	0.489	0.852	0.0338	-0.00496	0.187	0.310
	(0.103)	(0.167)	(0.125)	(0.0596)	(0.111)	(0.174)
Observations	164	164	164	164	164	164
R^2	0.609	0.602	0.531	0.514	0.560	0.534

Notes: This table presents results from linear regressions of survey of professional forecasters' index of inflation expectations as the dependent variable, and the topical indices of conflict, $\mathcal{T}_{k,t}$, as the main independent variable. The regression sample is 1982q1-2022q4. Table A.1 describes the data and sources. Standard errors are robust to finite-sample correction of clustered/robust covariance estimates.

Table A.5: Case Studies

Identifier	Year	Headline	Detailed Snippet	Human Audit	Model	Model Explanation
1	1877	RAILROAD WAR IN NEBRASKA	Union Pacific and Burlington and Missouri Pro Rata Bill; Meeting to Indorse at Lincoln	1	1	Yes, the excerpt indicates a disagreement or conflict between stakeholders over prices, as it references a "Railroad War" and a "Pro Rata Bill," suggesting disputes over pricing practices among competing railroad companies.
2	1893	SILVER MINING AS A BUSINESS	Silver Crisis; Effect to Reduce Wages and Cheapen Production Predicted	1	1	Yes, the excerpt indicates a disagreement or conflict between stakeholders over wages, as it predicts a reduction in wages due to the silver crisis, suggesting differing interests between miners and employers regarding compensation.
3	1890	NOT ALLOWED A HEARING; IMPORTERS' PROTESTS GIVEN NO ATTENTION. WHAT THE M'KINLEY BILL MEANS TO THE TRADE OF NEW-YORK – THE SENATE TO BE APPEALED TO	NA	1	1	Yes, the excerpt indicates disagreement between importers and lawmakers over the implications of the McKinley Tariff, suggesting a conflict regarding trade policies that would affect prices and potentially wages in New York's trade sector.
4	1894	Gorman, Senator; Messages Against Change in Senate Bill Rates	MR. GORMAN MAKING THREATS; SENDS IMPUDENT MESSAGES TO TARIFF CONFEREES; Says that He Must Hear No More of a Disposition to Recede from Senate Rates – His Attitude and That of Those Associated with Him the Great Obstacle in the Way of an Early Agreement by the Committees of House and Senate	1	1	Yes, the excerpt mentions disagreement between stakeholders, specifically between Senator Gorman and the tariff conferees, over the rates in the Senate bill, indicating a conflict over pricing policy.
5	1919	Takes Control of Kansas City Lines	Property taken over by U. S. Marshals under orders from Judge Pollock as outgrowth of strike	1	1	Yes, the excerpt indicates a disagreement or conflict between stakeholders, as it references a strike that led to the U.S. Marshals taking control of the Kansas City Lines, suggesting disputes over labor conditions, which often involve issues of wages and prices.

Continued on the next page

Table A.5: Case Studies

Identifier	Year	Headline	Detailed Snippet	Human Audit	Model	Model Explanation
6	1922	IMPORTERS PROTEST U.S. VALUATION PLAN; Council Declares That Fordney Bill Will Create Monopolies and Increase Prices. PREDICT TRADE DECREASE	The National Council of American Importers and Traders issued a sttaement yesterday in reply to some of the arguments advanced in favor of the American valuation plan by the National Association of Manufacturers in convention in Washington. In summarizing some of the reasons why the passage of this clause in the Fordney Tariff bill would ...	1	1	Yes, the excerpt mentions disagreement between importers and manufacturers over the American valuation plan in the Fordney Tariff bill, indicating a conflict over how such a plan would affect prices and trade.
7	1933	UNION INVADES WALL ST.; Bookkeepers Local Seeks Recruits Under NIRA	Bookkeepers, Stenographers and Accountants Union begins organizing Wall St dist	1	1	Yes, the excerpt implies a disagreement or conflict between stakeholders over wages, as the union's efforts to organize suggest a push for better working conditions or pay for bookkeepers, stenographers, and accountants in the context of the National Industrial Recovery Act (NIRA).
8	1942	DR. HIRSCH URGES 'FAIR PRICE' CLAUSE	Dr J Hirsch urges OPA to include anti-profiteering clause in pending legislation. German Economist Calls It the Logical Supplement to Pending Legislation HE SEES NO OTHER WAY Holds It Bridges Gap Between Over-All and Selective Systems Now Considered	1	1	Yes, the excerpt indicates disagreement between stakeholders, as Dr. Hirsch advocates for a 'fair price' clause to address concerns over profiteering, suggesting a conflict between the interests of consumers and those of businesses during wartime price controls.
9	1946	PRESIDENT NAMES STEEL FACT BOARD, ASKS PRICE STUDY	OPA Is Instructed to Find Whether Rises in Selling Levels Are 'Proper' PANEL REPORTS BY FEB. 10 But Strike Is Set for Jan. 14 and Postponement by Union Remains in Doubt; STRIKES: Pres Truman names fact-finding bd composed of N P Feinsinger, Justice R C McDonough and Justice J A Douglas; orders OPA to study price increases; strike postponement discussed; issues revd	1	1	Yes, the excerpt mentions disagreement or conflict between stakeholders over prices as it discusses a strike set for January 14 and the involvement of a fact-finding board to study price increases, indicating contention between labor (the union) and management regarding wage and price levels.

Continued on the next page

Table A.5: Case Studies

Identifier	Year	Headline	Detailed Snippet	Human Audit	Model	Model Explanation
10	1962	Pres Kennedy urges early accord on new contract, news conf; offers Goldberg's services	EARLY WAGE PACT IS URGED IN STEEL; WASHINGTON, Jan. 15–An early agreement on a new wage contract in the steel industry was urged today by President Kennedy, His purpose was to avoid the upsetting uncertainty of a possible strike. Recalls Bad Effects Economic Report Due	1	1	Yes, the excerpt implies disagreement or conflict between stakeholders over wages in the United States, as it highlights President Kennedy's concern about the potential for a strike due to unresolved wage negotiations in the steel industry.
11	1973	QUOTAS BLAMED FOR FUEL CRISIS	Ford Foundation researcher S D Freeman on Jan 25 charges that oil shortage stems from Pres Nixon's refusal to end oil import quota program, speech, Consumer Federation of Amer; asserts quotas cost Amer consumers 'billions' yrly; says despite easing of quotas their retention will result in higher prices for both oil and gas	1	1	Yes, the excerpt indicates disagreement between stakeholders, specifically between the Ford Foundation researcher and President Nixon's administration, over the impact of oil import restrictions on fuel prices and shortages.
12	1974	S McBride, Chicago policeman and owner of 1st gasoline station to be closed down for energy crisis price violations, defends his refusal to surrender records to IRS by citing Pres Nixon's actions in White House tape controversy	GAS STATION OWNER CITES NIXON ON LAW	1	1	Yes, the excerpt mentions disagreement between the gas station owner and the legal authorities regarding price violations, as the owner refuses to comply with court orders, citing President Nixon's actions as justification.
13	1980	VOLCKER CRITICIZED BY CARTER ON RATES	President Sees Peril in High Levels Citibank Charge Up to 14% Carter Critical Of Volcker. WASHINGTON, Oct. 2 The Carter Administration warned today that the latest increase in interest rates could choke off the present economic recovery. It was the first note of official concern over the rise in rates.	1	1	Yes, the excerpt mentions disagreement between stakeholders, specifically between President Carter and Federal Reserve Chairman Paul Volcker, over the impact of high interest rates on the economy, indicating a conflict over monetary policy and its effects on economic recovery.
14	2009	Schwarzenegger Proposes Budget	Gov. Arnold Schwarzenegger's unusual 18-month budget plan contains a hefty sales tax increase and would cut away at California's state services.	1	1	Yes, the excerpt mentions disagreement or conflict between stakeholders, as it highlights the struggle between Governor Schwarzenegger and the California Legislature over how to address significant budget shortfalls, which involves contentious decisions regarding tax increases and cuts to state services.

Continued on the next page

Table A.5: Case Studies

Identifier	Year	Headline	Detailed Snippet	Human Audit	Model	Model Explanation
15	2023	Fed Official Compares Inflation to Uber Surge Pricing	Neel Kashkari, the president of the Minneapolis Fed, kicked off 2023 monetary policy debates with a call for better understanding of what causes inflation.	1	1	Yes, the excerpt indicates potential disagreement or conflict between stakeholders, as it mentions a ”contentious year of debate” regarding the pace of price increases and the necessary actions of the Federal Reserve, suggesting differing opinions on how to address inflation.
16	1945	WASHINGTON SEES LUBLIN DIFFICULTY; Recognition of New Government in Poland Would Conflict With Present Course	The action of the Lublin Committee of National Liberation in proclaiming itself the Provisional Government of Poland has placed the newly reorganized State Department	0	0	No
17	1990	Pope Warns on Rekindling of Rivalries in East	Pope John Paul II today hailed the ”irrepressible thirst for freedom” that has ”broken down walls and opened doors” in Eastern Europe, but he warned that the rapid political changes could unleash nationalist feelings and ethnic conflicts.	0	0	No
18	2020	The Coronavirus: What Scientists Have Learned So Far	A novel respiratory virus that originated in Wuhan, China, last December has spread to six continents. Hundreds of thousands have been infected, at least 20,000 people have died and the spread of the coronavirus was called a pandemic by the World Health Organization in March.	0	0	No
19	2022	U.S. Details Costs of a Russian Invasion of Ukraine	WASHINGTON: The Biden administration and its allies are assembling a punishing set of financial, technology and military sanctions against Russia that they say would go into effect within hours of an invasion of Ukraine, hoping to make clear to President Vladimir V. Putin the high cost he would pay if he sends troops across the border.	0	0	No
20	2023	Economists Pin More Blame on Tech for Rising Inequality	Recent research underlines the central role that automation has played in widening disparities.	0	0	No

Table A.6: Keyword Dictionary for The Economist

collective bargaining	inflation clash	pay disagreement	strike tension
compensation dispute	inflation conflict	pay equity	tariff conflict
cost conflict	inflation disagreement	price conflict	tariff dispute
cost controversy	inflation dispute	price disagreement	tariff war
cost disagreement	inflation pressure	price dispute	union dispute
cost dispute	inflation surge	price divergence	union rally
cost escalation	inflationary friction	price tension	union resistance
cost inflation	inflationary tension	price volatility	union strike
currency conflict	interest dispute	pricing controversy	value dispute
employment dispute	labor conflict	pricing friction	wage conflict
fair wage	labor strike	pricing instability	wage dispute
deflationary tension	labor unrest	pricing struggle	wage inflation
deflationary friction	living wage	pricing war	wage stagnation
deflation pressure	market inflation	rate conflict	wage suppression
deflation conflict	minimum wage	rate disagreement	worker protest
deflation clash	monetary conflict	salary conflict	worker rights
deflation disagreement	monetary dispute	salary disagreement	
deflation dispute	monetary tension	salary tension	

Notes: This table lists the keyword dictionary that is used to construct a time-series measure based on the word-counting method and The Economist's digital archive.