Why Do Workers Dislike Inflation? Wage Erosion and Conflict Costs*

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Abstract

How costly is inflation to workers? Answers to this question have focused on the path of real wages during inflationary periods. We argue that workers must take costly actions ("conflict") to have nominal wages catch up with inflation, meaning there are welfare costs even if real wages do not fall as inflation rises. We study a menu-cost style model, where workers choose whether to engage in conflict with employers to secure a wage increase. We show that, following a rise in inflation, wage catch-up resulting from more frequent conflict does not raise welfare. Instead, the impact of inflation on worker welfare is determined by what we call "wage erosion"—how inflation would lower real wages if workers' conflict decisions did not respond to inflation. As a result, using observed wage growth to measure worker welfare understates the costs of inflation. We conduct a survey showing that workers are willing to sacrifice around 1.75% of their wages to avoid conflict. Calibrating the model to survey data, we find that incorporating conflict significantly raises the costs of inflation for workers.

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1 Introduction

People in 2023 thought inflation was one of the United States' worst problems (Pew Research Center, 2022, 2023). Why do people dislike inflation so much? One reason could be that prices rise faster than nominal wages when inflation is high, meaning real wages fall and workers become poorer (Shiller, 1997; Stantcheva, 2024). A classic view, for instance from Fischer and Modigliani (1978) or Mankiw's (2020) textbook, suggests that this cost of inflation is small. The argument is that nominal wages generally keep up with prices after an inflationary shock. As a result, real wages do not persistently fall and workers do not suffer much.

This paper argues that inflation imposes costs on workers beyond its impact on real wages. We start from the observation that employers do not automatically give workers raises when inflation is high. Instead, workers have to fight for these raises, which places them in conflict with employers. We propose a standard and tractable menu-cost style model that incorporates the role that costly conflict plays in determining wage growth. We show that accounting for "conflict costs" meaningfully changes our understanding of the costs of inflation, both analytically and quantitatively. In this setting, what matters for worker welfare is not how inflation impacts real wages, but rather how inflation would affect real wages if workers did not choose to engage in more conflict as inflation rises, a concept we term "wage erosion." Our framework delivers a direct mapping between conflict costs and the wages that workers would sacrifice to avoid conflict, which we measure from a survey of US workers to be 1.75% of their wages. Combining our model with these estimates, we find that conflict more than doubles the costs of inflation to workers relative to the costs of inflation implied by falling real wages alone.[1]

We start the paper with motivating survey evidence about the relationship between conflict and inflation. We fielded a survey to 3,000 US workers at the start of 2024, in the aftermath of the post-pandemic inflation, and arrive at two conclusions. First, we find that conflict is important for determining wage growth. A significant portion of workers report taking costly actions—that is, they engaged in conflict—in 2023 to achieve higher wage growth than their employer offered. These actions include having tough conversations with employers about pay, partaking in union activity, or soliciting job offers. We find that these costly actions lead to higher wage growth: participants who took these actions report their median wage growth in 2023 was 3

[1] By the same logic, "conflict costs" can also be relevant for the welfare costs of other shocks that require nominal wage adjustments.

percentage points higher than the median of employers' default offers. Conversely, those who did not take the costly actions believe that conflict would have raised their median wage growth by 2 percentage points, suggesting sizable conflict costs that offset the benefits of higher wages.

Second, we find that conflict rises with inflation. Respondents say that the costly actions were primarily motivated by wanting wages to keep up with inflation. Additionally, when asked how they would behave at different rates of inflation, respondents were more likely to engage in conflict with employers when inflation was higher. We complement this result with observational evidence that conflict between workers and firms is more likely when inflation is higher. In cross-country panel regressions, we document a robust positive correlation between inflation and proxies for conflict such as labor market strikes, union membership, and job switching.

We propose a tractable "conflict cost" model to capture this state-dependent nature of wage setting and to investigate how conflict affects the welfare costs of inflation. Similar to the menu cost literature, workers face idiosyncratic productivity shocks. Motivated by our survey evidence, workers in the model receive a default nominal wage offer from their employer. Unless the offer is fully indexed to inflation, the worker's default real wage falls when inflation rises. In response, workers optimally choose whether to engage in conflict with employers. Conflict increases the worker's wage beyond their employer's default offer, ensuring that it keeps up with inflation. However, conflict is costly to workers. In our model, costly conflict is more likely as inflation rises, consistent with the state-dependence suggested by our motivating evidence. Without conflict, higher inflation lowers default real wages, raising the potential gains from conflict. These greater gains induce more workers to engage in conflict.

Our main analytical result characterizes the welfare costs of inflation shocks to workers. The path of real wages is no longer sufficient to inform worker welfare in this setting. In particular, wage catch-up after inflation that is achieved through more frequent conflict does not raise welfare. On the margin, the extra conflict costs paid by workers to ensure higher wages offset the benefits of those higher wages. The offset follows from worker optimality and the envelope theorem of Milgrom and Segal (2002), applied to discrete choices. Instead, the first-order impact of inflation shocks on worker welfare is determined by "wage erosion," defined as the effect of inflation shocks on real wages if workers' conflict decisions remain unchanged in response to inflation. As such, the welfare costs of inflation in the labor market can be significant even if real wages do not fall much, as workers must take costly actions more frequently to ensure wage catch-up. Moreover, unlike falls in real wages, which redistribute from workers to firms, conflict costs potentially create aggregate losses too.

How quantitatively important is conflict for the welfare costs of inflation? We answer this question by calibrating our model using additional, tailored survey questions. We then calculate the welfare costs of inflationary shocks to workers within that environment. We designed survey questions to directly inform the key parameters governing the importance of conflict in the model: the cost to an individual worker of conflict with an employer and the extent to which employers' default wage offers are indexed to inflation. In the survey, we find that conflict with employers is costly to workers – the median worker who dislikes these actions would sacrifice 1.75 percent of their wages to avoid conflict. We validate this estimate by showing that our measure of conflict costs predicts workers' reported conflict decisions in 2023. Regarding indexation, we find that workers perceive employers' default wage offers as weakly indexed to inflation. When presented with hypothetical inflation scenarios, they reported that, absent conflict, employers would raise default nominal wage growth by only 0.05 percentage points for each one percentage point increase in inflation.

When calibrated to match these survey moments, our model implies that conflict significantly raises the welfare costs of inflation for workers. In response to either transitory or persistent inflation shocks, incorporating conflict more than doubles the overall costs of inflation to workers. In various extensions, conflict continues to significantly increase the costs of inflation—for instance, at significantly higher levels of default wage indexation than our baseline calibration; when inflation and employment are determined in general equilibrium, allowing inflation to "grease the wheels" of the labor market (Blanco and Drenik, 2023; Blanco et al., 2025a); or when studying the inflation episode of 2021-23. In sum, the "conflict cost" model is a quantitatively relevant and tractable way of understanding the welfare costs of inflation for workers.

Beyond the specific application to the costs of inflation, our conflict cost model is a natural way of introducing state-dependent wage setting into New Keynesian models. To model sluggish wage adjustments, the New Keynesian literature typically assumes time-dependent wage setting (e.g., Erceg et al., 2000). State-dependent wage setting is a natural alternative. After all, the state-dependent approach is common when modeling price setting, and state dependence is consistent with empirical evidence in our survey and beyond (e.g., Grigsby et al., 2021). Moreover, there are distinct positive and normative implications compared to the time-dependent approach.[2]

Related literature. This paper contributes to the large literature on the costs of inflation. Previous work identifies inflation costs from a range of mechanisms, such as "shoe leather costs" of holding less money (e.g., Friedman, 1969; Lucas, 2000); "menu costs" from changing prices and the associated price distortions (e.g., Nakamura et al., 2018; Alvarez et al., 2019); tax distortions (e.g., Feldstein et al., 1978); uncertainty due to volatile inflation (Friedman, 1977); cognitive costs due to complexity and difficulty in budgeting (Binetti et al., 2024; Gabaix, 2025); and broader costs such as declining trust in government. Besides these other costs, we argue for significant "conflict costs" of inflation via the labor market.

Surveys from Shiller (1997) and Stantcheva (2024) show that people dislike inflation in large part because they believe high inflation lowers their standard of living. Our mechanism suggests a reason for this view. People know that if prices have risen faster than the default nominal wage offered by their employer, they must engage in painful conflict with their employer to rectify the situation. Del Canto et al. (2025) operationalize a sufficient-statistic approach in order to estimate the effect of inflationary shocks on welfare, taking into account, amongst other channels, the effect of inflation on real wages.[3] We show that the behavior of real wages is an important but incomplete account of the costs of inflation that operate in the labor market. Rather, having nominal wages keep up with prices entails significant additional welfare costs due to conflict.

In arguing that inflation leads workers to take costly actions, our paper relates to some previous evidence. Pilossoph and Ryngaert (2024), Stantcheva (2024), and Hajdini et al. (2025) use observational data and survey hypotheticals to show that workers with higher inflation expectations are more likely to search for new jobs in order to secure nominal pay increases. Besides providing additional survey evidence consistent with these papers, we model the welfare effects of inflation due to these costly actions, and quantify the costs with our survey and model.

There is also a growing literature exploring how job search affects wages and welfare dur-

[2] Previous work by Takahashi (2018), Costain, Nakov, and Petit (2019), Blanco and Drenik (2023) and Jo (2025) studies positive implications of state dependence in wage setting.

[3] Ferreira et al. (2024) and Pallotti et al. (2024) apply a similar sufficient statistic approach. Auclert (2019) develops the sufficient-statistic approach, in order to analyze the positive implications of monetary policy shocks. Doepke and Schneider (2006) also estimate the redistributional effect of inflation via asset markets, as opposed to labor markets.

ing inflationary episodes. Afrouzi et al. (2025) implement a state-of-the-art quantitative labor-search model with nominal rigidity, disciplined with information on labor market flows. We instead model a wide range of costly actions via a reduced form "conflict cost," within a menu-cost style model disciplined by survey evidence. Despite these differences, the two quite different approaches reach a similar conclusion: costly actions to secure wage increases are a key feature of inflationary episodes. Pilossoph et al. (2024) study how inflation reallocates workers along the job ladder, and its implications for the costs of inflation.

There is an empirical literature studying whether nominal wages keep up with inflation. Modern work such as Blanco et al. (2025b) emphasizes that wage dynamics during inflationary episodes depend on factors such as the nature of the inflationary shock and especially workers' position in the wage distribution. Consistent with this view, poorer workers experienced stronger real wage growth during the post-pandemic inflation (Autor et al., 2023). A common finding is that wages at least partly keep up with inflation for most workers, motivating us to study the associated costs.

Lorenzoni and Werning (2023a,b) study related themes about inflation and conflict. The aspect of conflict studied in these papers is disagreement between workers and firms over relative prices. In this way, conflict is a proximate cause of inflation dynamics. We study a related but different aspect of conflict: how inflation makes workers seek conflict with their employers to raise wages. Rather than investigate the cause of inflation, we ask how conflict affects the costs of inflation to workers.

2 Survey Design

We designed a two-part survey to motivate and calibrate our model. The first part gathers descriptive evidence on how workers responded to inflation in 2023, focusing on conflict and wage growth. The second part uses hypothetical scenarios to measure key parameters of our model.

The survey was conducted in the United States between February and March 2024 using Prolific, a research survey marketplace. We collected 3,000 responses from non-self-employed individuals aged 22 to 60 who were employed either full-time or part-time. To ensure data quality, we included an attention check: participants who failed were asked to return their submissions. We also imposed demographic quotas based on gender, education, and political affiliation. The quotas for gender and education matched population shares from the March 2023 Current Population Survey (CPS), while the political affiliation quota was based on Gallup data from 2024. On average, participants took 7 minutes and 15 seconds to complete the survey and were compensated at a rate equivalent to $12 per hour.

The context of the survey was the aftermath of a period of high inflation: inflation had been 8 percent in 2022 and 4.1 percent in 2023 and unemployment had been low, averaging 3.6 percent over this period. Therefore, the first part of the survey, which asks respondents about their labor market experience in 2023, provides context-dependent evidence explaining how workers behaved during a period of high but falling inflation. The second part of the survey asks hypothetical questions, which abstract from recent labor market conditions and therefore are better suited to calibrating key parameters of our model.

Appendix Table B.1 compares our sample characteristics to the US population. Our sample broadly matches the demographic distribution of the US population, albeit with a higher representation of individuals in their thirties and a smaller proportion of respondents in their fifties. Additionally, our sample includes a lower share of white individuals and a higher share of mixed-race individuals.

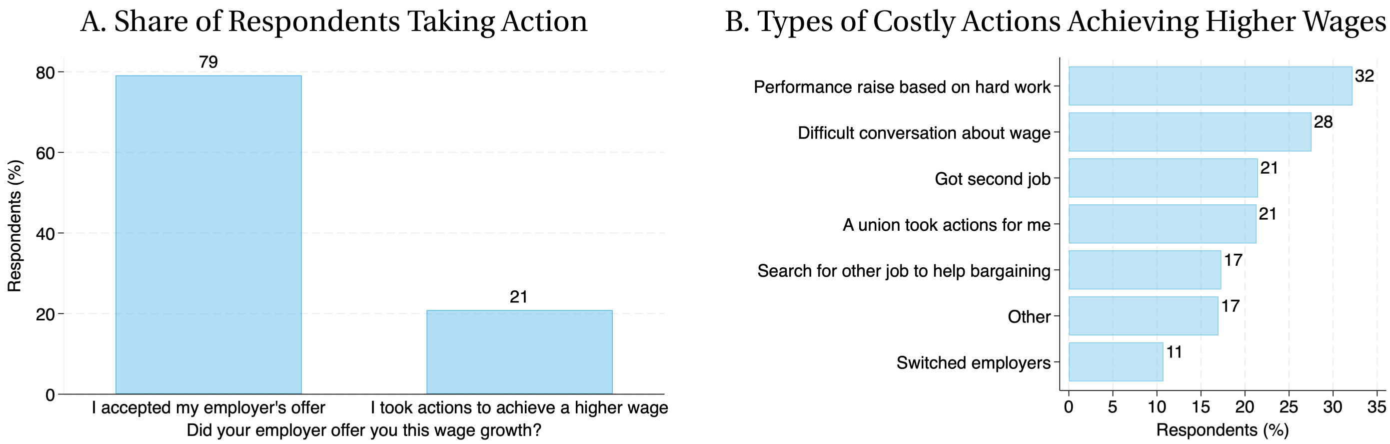
In the survey, we asked questions about "pay growth" and not "wage growth," because in preliminary tests we discovered that survey respondents found the "pay growth" wording easier to understand. However, for consistency with the rest of the paper, we refer to "wage growth" as we describe our results. The full questionnaire is in Appendix Section E.

3 Motivating Evidence: Wages, Inflation and Conflict

This section presents four empirical patterns that motivate our model. These findings document how conflict shaped wage growth in 2023. Because this evidence refers to a specific context—following a period of high inflation—we interpret it as motivating evidence about how conflict takes place. In Section 5 and in the second part of the survey, we use hypothetical questions to identify the key parameters of our model.

Finding 1: Workers chose between accepting their employer's default wage offer and engaging in costly conflict. We first elicited respondents' nominal wage growth in 2023 and then asked whether they accepted the default wage offered by their employers or took costly actions

Figure 1: Wage Growth and Costly Actions



Notes: Panel A illustrates the percentage of survey participants who either accepted their employers' default wage offer or took costly action to achieve a higher wage growth. For participants who took costly actions to secure higher wage growth in 2023, Panel B displays the percentage who undertook each specific action. Participants were asked to select all actions that applied to them. Each bar in the figure corresponds, in order, to the following answer choices: "I worked longer hours or performed better at work to get a performance-based pay increase"; "I initiated a difficult conversation with my employer about my pay"; "I obtained a second job in addition to my main job"; "A union bargained for higher pay on my behalf"; "I searched for a higher-paying job with other employers to facilitate pay negotiations with my employer"; "Other, please add additional comments below"; and "I switched employers to get a raise."

to secure this wage growth. Figure 1, Panel A, shows that 79% of workers accepted the wage offer made by their employer, while 21% of workers took actions to secure their wage growth. These costly actions are what we term "conflict." We find modest heterogeneity in who takes costly actions, with those who are younger, have higher incomes, or work in the government being slightly more likely to accept the default wage offers. The only group that was much less likely to have accepted the default wage offer was those in unionized sectors (see Appendix Figures B.1 and B.2).

We then investigated which actions respondents took to secure a higher wage growth. Figure 1, Panel B, shows the fraction of respondents who reported each action among those who took action.[4] We see that workers took a diverse set of actions, such as having difficult conversations with their employer, securing an offer from another employer to raise their wage with their current employer, having a union negotiate on their behalf, or working harder. Moreover,

[4]To elicit the actions in Figure 1, Panel B, without imposing preconceptions, we adopted the following procedure. In pilots, we asked respondents to explain their decisions in open-ended form. We then grouped these actions into categories, and asked the full survey to select from within these categories, also allowing respondents to select an "other" option, and randomizing the order. We will use the same procedure to elicit respondents' motivations for taking or not taking actions.

36 percent of respondents reported taking more than one action.[5]

Finding 2: Conflict raised wages. Workers who engaged in conflict believe these actions increased their wage growth. Orange bars in Panel A of Figure 2 display the distribution of nominal wage growth that action-takers reported receiving in 2023. We also asked respondents what nominal wage growth they believed they would have received without taking actions, and we plot its distribution in blue. The distribution of hypothetical wage growth without actions (blue bars) is generally to the left of actual wage growth (orange bars), with a median nominal wage growth of 0 percentage points without actions, compared to 3 percentage points with actions.[6]

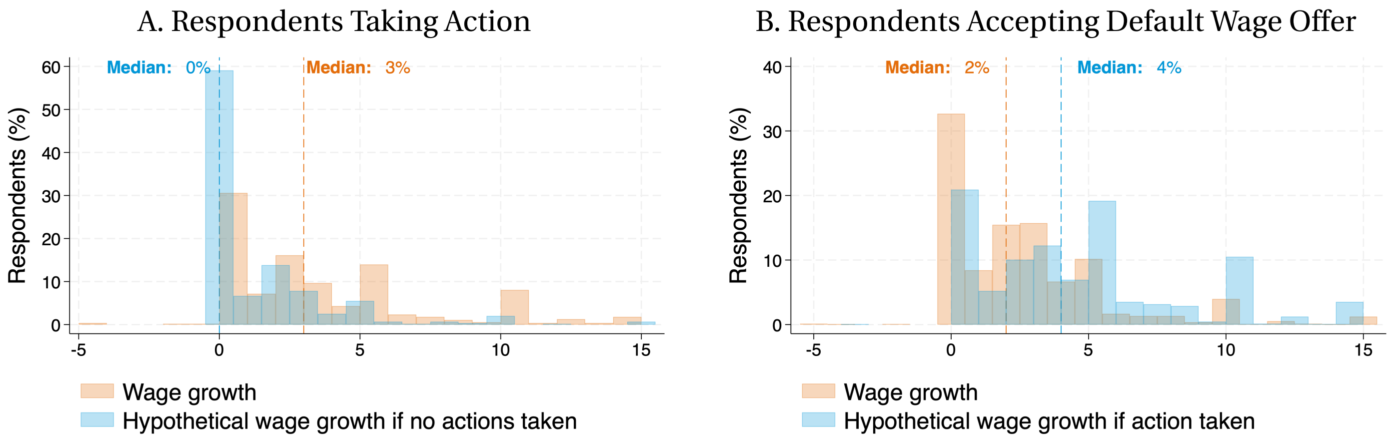
There is a similar pattern, both quantitatively and qualitatively, from directly comparing the wage growth for those workers in our survey who engaged in conflict in 2023 to those who did not. On average, those who took actions had a nominal wage growth that was 1.8 percentage points higher than those who did not, even conditional on other worker observables (see Appendix Table B.2 for details). Indeed, this pattern holds not only for nominal wage growth but also for perceived real wage growth, defined as the worker's nominal wage growth minus their perceived inflation rate in 2023. Workers who took action perceived their real wage growth to be 1.7 percentage points higher than that of those who did not take action.

Finding 3: Workers who did not engage in conflict believed it would have raised their wages. What about the workers who did not engage in conflict in 2023? One possibility is that workers did not engage in conflict because they believed it would not raise wages. Another possibility is that conflict could have raised their wages, but these workers disliked taking such actions. The evidence suggests the latter. In Panel B of Figure 2, we plot the distribution of nominal wage growth of people who did not take actions (orange bars), as well as the distribution of nominal wage growth they believe they would have received if they had taken actions (blue bars). These workers believe that median wage growth would have been 4 percentage points if they had taken actions, compared with 2 percentage points for median wage growth without

[5] For instance, of the 32% of respondents who took action by working harder, only 35% of them (11% of all action takers) took only this single action.

[6] Panel A of Appendix Figure B.3 plots the difference in nominal wage growth, with or without action, for each worker who took actions to secure a higher wage growth. The median worker reported that their actions raised their wage growth by 2%. The pattern in Panel A of Figure 2 also holds for perceived real wage growth, which we define as the worker's nominal wage growth minus their perceived rate of inflation in 2023. In Panel A of Appendix Figure B.4, the median perceived real wage growth of workers who took costly action was higher than it would have been without the action.

Figure 2: The Effectiveness of Conflict



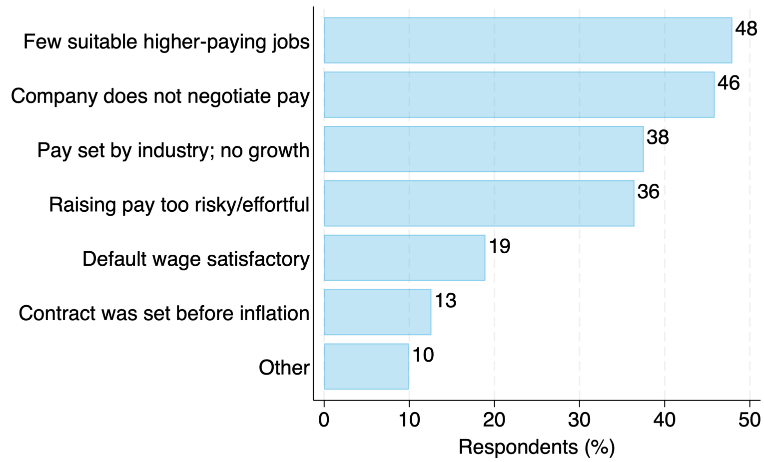
Note: Panels A and B depict the distribution of reported nominal wage growth in 2023 and the hypothetical nominal wage growth respondents reported they would have received if no actions had been taken or if actions had been taken to achieve a higher wage growth, respectively. The data range has been truncated, with values ranging from a minimum of -5% to a maximum of 15%. Panel A restricts to respondents who took actions in 2023, asking the question "Above, you indicated that you got a pay raise by either initiating a difficult conversation with your employer about your pay, searching for a higher paying job with other employers or switching employers in order to get a raise. If you, or possibly your union, had not implemented any of these strategies, what pay growth do you think your employer would have offered you in 2023?" Panel B restricts to respondents who accepted their employers' default wage offer in 2023, asking the question "[w]hat pay growth do you think you could have attained this past year if you had taken actions such as initiating a difficult conversation with your employer to ask for a raise, searching for higher paying jobs with other employers, or switching employers in order to get a raise?".

actions.[7]

The motivations of respondents who accepted the default wage offer suggest that acting to achieve higher wage growth is costly, as reported in Figure 3. Only 19% of these respondents said they did not take action because the default wage offer was satisfactory. The remainder cited a variety of reasons why taking action was difficult. In principle, even without costly conflict, workers might accept an unsatisfactory default wage offer if firms compensate them in other ways. For instance, the firm might offer better non-wage amenities instead of a higher default wage, or it might be unable to adjust wage offers in the short term but can compensate workers in the long term. However, in Figure 3, no respondent mentions non-wage amenities (within the "other" category); and only 13% hint at the possibility that a favorable contract in the future prevented them from taking actions that year ("contract was set before inflation").

[7] Panel B of Appendix Figure B.3 plots the difference in nominal wage growth, with or without action, for each worker who did not take actions to secure a higher wage growth. The median worker who did not take action believes their wage growth was 1 percentage point lower because they accepted their employer's default wage offer. The pattern in Panel B of Figure 2 also holds for perceived real wage growth, which we define as the worker's nominal wage growth minus their perceived rate of inflation in 2023. In Panel B of Appendix Figure B.4, the median perceived real wage growth of workers who did not take action was lower than it would have been with the action.

Figure 3: Motivations to Accept Default Wage Offer

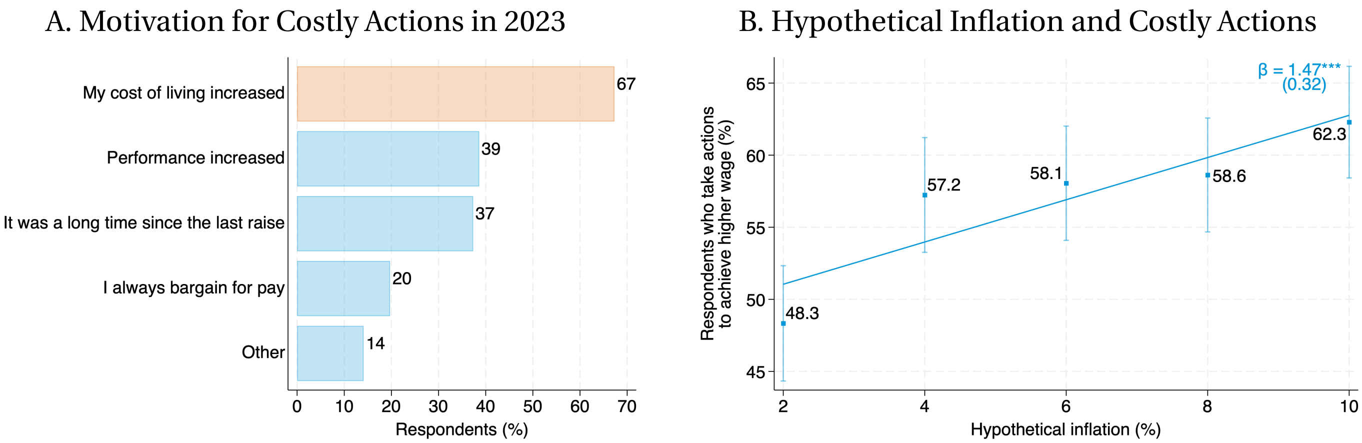


Note: This figure displays the percentage of participants who accepted their employers' default wage offer in 2023 citing each specific motivation. Participants were asked to select all motivations that applied to them. Each bar in the figure corresponds, in order, to the following answer choices: "I am unlikely to be able to find a higher paying job that suits me as well as my current job, perhaps because of the perks and benefits offered by my job, or because there are few good alternative jobs."; "My company does not negotiate to increase my pay. Perhaps because they would have to lay off workers or because they can replace me with another employee."; "My company sets pay in line with the rest of the industry, and industry-wide pay is not growing, perhaps because of the state of the overall economy."; "Taking actions to raise my pay, such as a difficult conversation or searching for a new job, is too difficult. These actions take too much time or effort, or risk a conflict with my employer."; "My employer's default wage offer was satisfactory, because they offered wage growth in excess of the increase in my cost of living."; "My contract was negotiated before the higher inflation."; and "Other, please add additional comments below."

Finding 4: Inflation leads to conflict. Our final finding considers the link between inflation and conflict. We present several pieces of evidence that suggest that inflation leads to conflict. First, we asked workers taking costly actions in 2023 to report why they chose to act. The answers, in Panel A of Figure 4, show that rising inflation was their main motivation, with 67% of the action takers reporting that they needed to combat a high cost of living and 78% of respondents citing either the cost of living or that it had been a long time since they got a raise. The next most important reason is that people deserved higher pay due to their performance, which mattered for only 39% of respondents.

Second, we used a hypothetical question to test whether workers are more likely to engage in conflict when inflation is high. We randomly assigned participants into five equally sized groups, each of which was offered a hypothetical scenario in which inflation was expected to be either 2%, 4%, 6%, 8% or 10% over the next 12 months. We stipulated that other aspects of employment such as hours worked and their employer would remain the same. We first asked respondents what nominal wage growth they thought their employer would offer them in that scenario. We then asked whether respondents would choose to take actions to achieve higher

Figure 4: Inflation and Conflict in Survey Data



Note: Panel A displays the percentage of each specific motivation for participants who took costly actions to secure higher wage growth in 2023, answering: "[w]hat was your, or your union's, motivation for taking actions in order to secure a pay increase in 2023?" Participants were asked to select all motivations that applied to them. Each bar in the figure corresponds, in order, to the following answer choices: "My cost of living increased due to high inflation, therefore I needed more money to fund my spending and saving plans"; "My performance and output in the workplace increased significantly"; "It was a long time since the last time my pay had been increased"; "I always bargain for pay"; and "Other, please add additional comments below". Panel B displays the relationship between the indicator of whether respondents would take actions to secure a wage growth higher than their employer's default offer under a hypothetical inflation scenario, and the hypothetical inflation rate. Standard errors are in parentheses. *** indicates significance at the 1% level. The sample is all respondents. Respondents answered the following question. "Consider a hypothetical situation in which inflation is expected to be π in the next 12 months. Suppose that you are working at the same job at the same place you currently work, and working the same number of hours. Would you accept your employer's offer without taking any actions to increase your pay or would you do your best to increase your pay using any strategies at your disposal?" The hypothetical inflation scenario is $\pi = 2\%, 4\%, 6\%, 8\%$ and 10%.

wage growth. Figure 4, Panel B, shows the results. The y-axis shows the fraction of respondents who, when given a particular hypothetical scenario, say they would engage in conflict with their employer to achieve higher wage growth. The x-axis is hypothetical inflation under each scenario. When hypothetical inflation is 2%, 48% of respondents say they would take costly actions to achieve higher wage growth. However, when inflation is hypothetically 10%, more than 60% of respondents would take action. The regression line indicates that for every percentage point increase in inflation, people believe they would be 1.47 percentage points more likely to take actions that put them in conflict with their employer. Pilossoph and Ryngaert (2024) and Hajdini et al. (2025) present related findings using survey and observational data—higher inflation expectations lead workers to search for new jobs, which is a specific kind of costly action.

Third, we find similar patterns in observational data, documenting a positive cross-country correlation between several proxies for conflict and inflation. We proxy the prevalence of conflict using cross-country data on union membership, union strikes, and job-to-job transitions, which are common costly actions reported in Figure 1. Consistent with our survey result, all three of these measures rise with inflation. Specifically, we estimate a regression

$$\Delta Y_{c,t} = \beta_\pi \Delta\pi_{c,t} + \gamma_c + \gamma_t + \epsilon_{c,t}, \tag{1}$$

where $Y_{c,t}$ is the proxy for labor market conflict in country c in year t and $\pi_{c,t}$ is the inflation rate in country c in year t. γ_c and γ_t are country and year fixed effects, respectively. We measure union membership as the fraction of employed workers in unions and we measure strikes using the log of the number of workers on strike in a given year, both sourced from the International Labor Organization. The union membership panel contains 37 countries from 1960–2022 and the strike activity dataset has 80 countries from 1969–2022. We measure job-to-job transitions as the fraction of employed individuals in one period who are employed by a different employer in the next period. We use data from Donovan, Lu, and Schoellman (2023), who construct harmonized measures of job-to-job transition rates. We use this data for 30 countries from 1997 to 2021.

The combination of differencing and fixed effects in Regression (1) removes country-specific trends in both conflict and inflation, consistent with our focus on shocks to inflation rather than changes in steady-state inflation. We are interested in β_π, which captures the relationship between the change in conflict and the change in inflation over the corresponding period.

Table 1 shows the results. Columns 1 through 3 show the results for 5-year changes and Columns 4 through 6 show the results for 2-year changes. Appendix Figure B.5 shows the binned scatterplot underlying the estimate of β_π in columns 1 through 3. There is a clear positive relationship – when inflation in a country rises by 10 percentage points over a 5-year period, job-to-job transitions rise by 1.0 percentage point, the fraction of employees who are in unions rises by 1.1 percentage points, and the number of workers on strike increases by 24 percent. Appendix Table B.3 shows that these relations are robust to various choices such as the time difference, fixed effects, outlier trimming, or the inclusion of other business-cycle controls. Overall, these correlations are consistent with the premise that an increase in inflation leads to more conflict between workers and firms. However, we caution that other reasons for the relationship are also possible—for instance, higher union power could cause more industrial action and, as a result, more inflation.

Towards a model of inflation and conflict. So far, our descriptive evidence suggests that inflation leads workers to take costly actions—which we term conflict— to have wages keep up

Table 1: Labor Market Action and Inflation: Cross-Country Evidence

	5-Year Difference			2-Year Difference		
	Job-to-Job (1)	Union (2)	Strikes (3)	Job-to-Job (4)	Union (5)	Strikes (6)
$\Delta_{t,t-5}$ Inflation	10.017***	11.150**	2.361***			
	(3.435)	(5.187)	(0.478)			
$\Delta_{t,t-2}$ Inflation				3.486	7.468**	0.929**
				(2.496)	(3.093)	(0.400)
Observations	282	1,308	1,962	381	1,419	2,196

Notes: This table shows the relationship between inflation and three labor market outcomes: job-to-job transitions (30 countries from 1997-2021, sourced from Donovan et al., 2023), union membership (37 countries from 1960–2022, sourced from the International Labour Organization), and strike activity (80 countries from 1969–2022, sourced from the International Labour Organization). We use headline inflation (expressed in decimal form, e.g., 0.02 for 2%), sourced from the World Bank. In all cases, inflation is trimmed at the top 2% across all years and countries within the World Bank dataset. All regressions include both country and year fixed effects. The dependent variable in the first three columns is the 5-year difference in each labor market outcome, while the last three columns show the 2-year difference specifications. In columns 1 and 4, the dependent variable is based on the job-to-job transition rate (in percentage points). In columns 2 and 5, the dependent variable is based on the union membership rate (in percentage points), defined as the fraction of workers who are in a union. In columns 3 and 6, the dependent variable is based on the log of the number of workers involved in strikes and lockouts. Standard errors are clustered at the country level. Included years and countries vary by column depending on data availability.

with inflation. The next section models this behavior and studies its implications for the welfare costs of inflation.

How should our model incorporate conflict? Because conflict can take many forms and none of the specific costly actions in Panel B of Figure 1 dominate, we follow the approach of menu-cost models of price setting (e.g., Golosov and Lucas, 2007). We model workers as paying a generic "conflict cost" to engage in conflict. This approach is suitable for us, as our key economic lesson does not depend on the underlying forms of conflict. At the margin, the benefits of higher wages from more frequent conflict are always offset by the associated conflict costs.

Specific forms of conflict from Panel B of Figure 1 connect to theoretical mechanisms studied in the literature. Costs of achieving higher wage growth can come from on-the-job renegotiation costs (Blanco and Drenik, 2023), costly job search (Afrouzi et al., 2025), the standard disutility from increasing labor supply, and the costs of initiating collective bargaining. The range of motives of workers who did not choose conflict in Figure 3 also connects to interesting theoretical mechanisms. 48% of workers did not seek conflict because they were unlikely to find a better job than their current one. These workers could be at the top of a job ladder, related to Burdett and Mortensen (1998). Moreover, 38% of workers did not engage in conflict because their firm set wages comparable to the rest of the industry, suggesting that strategic complementarities are relevant (Fukui, 2020). 36% of respondents said that raising wages at their current job was too difficult, suggesting that the on-the-job renegotiation costs of Blanco and Drenik (2023) are prohibitively large. Detailed explorations of specific forms of conflict for the impact of inflation are beyond the scope of our paper and are studied in greater detail in related work of Afrouzi et al. (2025), Blanco et al. (2025a), and Pilossoph et al. (2024).

How do we measure this generic conflict cost? While our descriptive evidence above is useful to motivate the model, it is not designed for measurement. The descriptive evidence reflects respondents' actions taken in response to the specific high but falling inflation in 2023. Survey respondents also choose whether to engage in conflict, potentially selecting into conflict in 2023 for reasons that may be challenging to model. As a result, in Section 5, we design hypothetical survey questions better suited to measuring the conflict cost, as they abstract from the particular actions taken in response to the specific economic conditions faced in 2023.

4 A Conflict-Cost Model

Motivated by the evidence in the previous section, we develop a "conflict-cost model" to investigate how conflict affects the welfare costs of inflation to workers. In the model, which focuses on the worker's decision problem, workers receive a default wage offer from their employer. This default offer may not be fully indexed to inflation. Workers optimally choose whether to engage in costly conflict with their employer to have their wages catch up with inflation. We emphasize key parameters that determine how conflict affects the welfare costs of inflation in the model, which we measure using survey hypotheticals in Section 5.

4.1 The Worker's Problem

Time is discrete and indexed by $t \in \{0, 1, \ldots\}$. The economy is populated by a continuum of workers $i \in [0, 1]$. Each worker's expected utility is given by

$$\mathcal{U}_i = \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \left(\log c_{i,t} - \kappa_{i,t} \mathcal{I}_{i,t}\right)\right], \tag{2}$$

where $c_{i,t}$ is the worker's consumption, over which they have logarithmic utility.[8] The indicator $\mathscr{I}_{i,t}$ takes a value of one if the worker chooses to take actions that place them in conflict with their employer in order to increase their wage, and zero otherwise. $\kappa_{i,t}$ is the "conflict cost", i.e., the utility cost to worker i of taking the costly action at time t. The conflict cost takes the "Calvo-plus" form of Nakamura and Steinsson (2010) and Auclert et al. (2024).[9] Specifically, with probability $1-\lambda$, the worker incurs a utility cost $\kappa > 0$ to increase their wage, meaning $\kappa_{i,t} = \kappa$. With probability $\lambda \in [0,1)$, conflict is costless to the worker, meaning $\kappa_{i,t} = 0$. The cost $\kappa_{i,t}$ is i.i.d. over time and across workers. A costless wage increase might come from workers having a low cost of conflict for idiosyncratic reasons. It may also arise from firms unsolicitedly offering workers wage increases to ensure their wages keep up with inflation and productivity growth, thereby avoiding conflict.

Each worker i receives a real wage $w_{i,t} = W_{i,t}/P_t$, where $W_{i,t}$ is the nominal wage and P_t is the price level. If the worker does not take actions to increase their wage $\left(\mathscr{I}_{i,t} = 0\right)$, they earn a default real wage $w_{i,t} = w^d_{i,t} = w_{i,t-1}e^{\alpha-\pi^{ss}-(1-\gamma)(\pi_t-\pi^{ss})}$, which follows from $W^d_{i,t} = W_{i,t-1}e^{\alpha+\gamma(\pi_t-\pi^{ss})}$ in nominal terms. Here, α denotes the growth rate of the default nominal wage at steady state inflation π^{ss}, $\gamma \in [0,1]$ is the degree of indexation to inflation shocks ($\gamma = 0$ is no indexation and $\gamma = 1$ is full indexation), and $\pi_t = \log(P_t/P_{t-1})$ is the inflation rate. If the worker takes actions to increase their wage $\left(\mathscr{I}_{i,t} = 1\right)$, they raise their wage to a conflict-induced (real) wage $w_{i,t} = w^*_{i,t}$. The conflict-induced real wage $w^*_{i,t}$ grows in line with productivity, following

$$\log w^*_{i,t} = \log w^*_{i,t-1} + g + z_{i,t}, \tag{3}$$

where $z_{i,t}$ represents idiosyncratic productivity shocks and g represents trend productivity growth. The idiosyncratic shock $z_{i,t}$ has a mean of 0, is i.i.d. across workers and time, independent of $\kappa_{i,t}$, is continuously distributed over a support $[\underline{z},\infty)$ with probability density function $f\left(z_{i,t}\right)$, where $\underline{z} \geq \alpha - \pi^{ss} - g$. The lower bound $\underline{z}$ in the support of $z_{i,t}$ guarantees that, at steady-state inflation, the worker's productivity shock realization is never so negative that their default wage $w^d_{i,t}$ exceeds the conflict-induced wage $w^*_{i,t}$.

[8]The log-utility case provides a clean benchmark because conflict decisions are independent of wage levels, conditional on the wage gaps defined in (5).

[9]We adopt "Calvo-plus" costs for simplicity, however our main results hold with a more general distribution of costs as in Caballero and Engel (2007) and Alvarez et al. (2022). See Section 4.3 for details.

In the main analysis, we assume that the conflict-induced nominal wage is exogenous and fully indexed with inflation by imposing (3). In Section 4.3, we also demonstrate how our main result extends to cases where the conflict-induced nominal wage is partially indexed or overshoots in response to inflation shocks. In Appendices C.3 and C.4, we also extend the model so that the conflict-induced wage is determined endogenously.

In the main analysis, we study the case where the worker is hand-to-mouth and $c_{i,t} = w_{i,t}$. In Section 4.3, we study the case in which the worker faces a standard borrowing constraint and verify that our main conclusion stands.

Discussion. This setup captures several features of wage setting found in Section 3. Workers choose between accepting a default wage offered to them by the employer or increasing wages by taking costly actions that place them in conflict with their employers. We use a single reduced-form parameter κ to capture the time, monetary, or psychological costs associated with these actions. The actions ensure a conflict-induced wage that keeps up with both inflation and productivity growth. In the absence of these actions, workers receive a default wage offered by the employer that may not be fully indexed to inflation shocks $(\gamma < 1)$. In other words, the default contract between workers and employers is potentially incomplete with respect to inflation shocks (Grossman and Hart, 1986; Hart and Moore, 1990), with the degree of incompleteness captured by a parameter γ.

Alternative, more sophisticated wage setting policies could feature firms setting wages to prevent conflict entirely, in order to avoid paying higher conflict-induced wages after workers take actions. For instance, firms could always offer wages that are just high enough that workers choose not to engage in conflict. Our survey suggests that this form of more sophisticated wage setting is not too common. First, this more sophisticated policy would imply that default wage offers must be fully indexed to inflation to keep workers exactly indifferent to engaging in conflict when inflation rises. Second, with these sophisticated policies, conflict would never be observed in equilibrium. Neither prediction is supported by our survey.[10] We therefore summarize firms' behavior by the steady-state growth rate and the inflation indexation of the default wage (α and γ, respectively) and the frequency of "free" catch-up opportunities for workers (λ), which firms may offer to avoid conflict. In Section 5, we discipline these parameters using re-

[10]Firms might not engage in sophisticated wage-setting policies if there are costs to adjusting wages away from the default wage offer, such as managerial frictions to rearranging contracts.

sponses to tailored survey questions.

Our model is similar to the standard menu-cost model of price setting (e.g., Alvarez et al., 2016). However, we apply the model to wage setting and in doing so, impose three important differences. First, in the menu-cost model, the firm's objective depends on a quadratic loss based on the gap between the current price and the optimal reset price, while in our model, the worker's objective is always increasing in the gap between the current wage and the conflict-induced wage (as formalized in (7)). Second, the adjustments in our model are one-sided—workers take actions to raise their wage but not to cut it. In standard menu-cost models, adjustment is two-sided, as firms pay menu costs to either raise or lower prices. Third, in our model, all workers periodically receive wage increases, even without costly conflict and even if they do not receive a free wage catch-up opportunity, due to the default wage increases governed by α and γ. In the standard menu-cost model, prices instead remain unchanged if the firm does not pay a menu cost or receive an exogenous free opportunity to change their price.

4.2 The Impact of Inflation Shocks on Worker Welfare and Wages

The economy starts from a steady state with inflation $\pi^{ss} \geq 0$. An unexpected aggregate shock to the path of inflation $\{\hat{\pi}_t\}_{t=0}^{\infty} \equiv \left\{\pi_t - \pi^{ss}\right\}_{t=0}^{\infty}$ is realized at the beginning of period 0.[11] The economy does not face other aggregate shocks. We are interested in characterizing how the inflation shock affects workers' welfare and (log) real wages. Specifically, workers' aggregate welfare and real wages are defined as

$$\mathscr{W} \equiv \int_0^1 \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \left(\log c_{i,t} - \kappa_{i,t} \mathscr{I}_{i,t}\right)\right] di \quad \text{and} \quad \log w_t \equiv \int_0^1 \log w_{i,t} di, \tag{4}$$

where $\mathbb{E}[\cdot]$ averages over the realization of idiosyncratic shocks (after the realization of the aggregate shock). The impact of the inflation shocks on workers' welfare and wages is denoted by $\hat{\mathscr{W}} \equiv \mathscr{W} - \mathscr{W}^{ss}$ and $\{\hat{w}_t\}_{t=0}^{\infty} \equiv \left\{\log w_t - \log w^{ss}\right\}_{t=0}^{\infty}$, respectively.[12]

[11] Both positive and negative shocks to $\hat{\pi}_t$ are allowed. Because of idiosyncratic shocks, the effects of inflation shocks on aggregate worker welfare are locally linear. In the main analysis, we focus on workers' problems and treat inflation as exogenous. In Appendix Section C.3, we study a general equilibrium model where inflation is endogenously determined.

[12] Note that, given workers' utility function, the change in welfare can be interpreted as a consumption-equivalent welfare loss, as in Lucas (1995).

To summarize the worker's problem conveniently, we introduce a "wage gap," defined as the difference between the actual wage and the conflict-induced wage, $x_{i,t} \equiv \log w_{i,t} - \log w^*_{i,t}$. Based on the process for real wages, the dynamics of the wage gap are given by

$$x_{i,t} = \begin{cases} x_{i,t-1} - \left(\mu + z_{i,t}\right) - \left(1-\gamma\right)\hat{\pi}_t & \text{if } \mathscr{I}_{i,t} = 0 \\ 0 & \text{if } \mathscr{I}_{i,t} = 1 \end{cases}, \tag{5}$$

where $\mu \equiv g - \alpha + \pi^{ss} \geq 0$ parameterizes the (negative) drift of the wage gap in steady state. We then rewrite the utility of worker i in (2) as a function of wage gaps, conflict decisions, and an exogenous constant that is invariant to conflict decisions and the path of inflation:

$$\mathscr{U}_i = \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \left\{\log\left(w^*_{i,t} e^{x_{i,t}}\right) - \kappa_{i,t}\mathscr{I}_{i,t}\right\}\right] = \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \left(x_{i,t} - \kappa_{i,t}\mathscr{I}_{i,t}\right)\right] + \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \log w^*_{i,t}\right]. \tag{6}$$

Worker i's problem can then be summarized by:

$$\max_{\{x_{i,t},\mathscr{I}_{i,t}\}_{t=0}^{\infty}} \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \left(x_{i,t} - \kappa_{i,t}\mathscr{I}_{i,t}\right)\right] \quad \text{s.t.} \quad (5) \text{ and } x_{i,-1} \text{ given.} \tag{7}$$

In each period t, a worker faces two options. First, the worker can choose to take actions ($\mathscr{I}_{i,t} = 1$), increasing their wage and eliminating the wage gap ($x_{i,t} = 0$). Second, the worker can refrain from conflict $\left(\mathscr{I}_{i,t} = 0\right)$ and allow the wage to adjust according to the employer's default wage offer, so $x_{i,t} = x^d_{i,t} \equiv x_{i,t-1} - \left(\mu + z_{i,t}\right) - \left(1-\gamma\right)\hat{\pi}_t$, where $x^d_{i,t}$ captures the wage gap implied by the employer's default wage offer.

When conflict is costly ($\kappa_{i,t} = \kappa$), the worker's optimal conflict choice can be characterized by a *threshold rule*: there exist thresholds $\{\mathbb{T}_t\}_{t=0}^{\infty}$ such that the worker engages in conflict ($\mathscr{I}_{i,t} = 1$) if $x^d_{i,t} \leq -\mathbb{T}_t$ and does not ($\mathscr{I}_{i,t} = 0$) if $x^d_{i,t} > -\mathbb{T}_t$. We use $\mathbb{T} > 0$ to denote the steady-state conflict threshold at which the worker is indifferent between conflict with employers and accepting the default wage at steady-state inflation π^{ss}.[13]

[13] There is a testable prediction—that the wage gap is a key determinant of conflict—which we verify using respondents' behavior in 2023. In Appendix Table B.4, we relate respondents' conflict decisions in 2023 to their perceived wage gap implied by the employer's default wage offer in 2023, defined as the difference between the nominal wage growth of their employer's default wage offer and their conflict-induced nominal wage growth. Consistent with our model, a more negative perceived wage gap strongly predicts more conflict (column 1), including after controlling for worker characteristics (column 2), and after controlling for perceived inflation—which, consistent

In the model, workers engage in conflict in steady state, without shocks to inflation. At π^{ss}, from the dynamics of wage gap in (5), there are two reasons a worker's wage gap can be pushed below $-\mathbb{T}$, inducing conflict: the negative drift of the wage gap in steady state ($\mu > 0$) and a large positive idiosyncratic shock $z_{i,t}$.

We now turn to characterizing the impact of inflation shocks on worker welfare. We first show that inflation increases the fraction of workers engaging in conflict, consistent with the survey and observational evidence in Finding 4 above. We define $\text{frac}_t \equiv \int_0^1 \mathscr{I}_{i,t} di$ as the share of workers who engage in conflict with their employer at each time t.

Proposition 1. *If $\gamma < 1$, then an increase in inflation at $t = 0$ leads to a larger fraction of workers engaging in conflict at $t = 0$, $frac_0$.*

Suppose that inflation increases. As long as default wages are not fully indexed to inflation shocks ($\gamma < 1$), workers' real wages fall absent conflict. As a result, more workers are pushed over their conflict threshold and choose to incur conflict costs in exchange for higher wages. This result shows that conflict is state dependent in the model. Alternatively, if conflict were time dependent—a special case of our model with $\kappa \to \infty$ and $\lambda > 0$—conflict $\{\mathscr{I}_{i,t}\}_{t=0}^{\infty}$ would not change with inflation.

We now study the impact of inflation shocks on aggregate worker welfare and how it connects with the responses of aggregate wages. We first decompose the response of aggregate (real) wages to inflation shocks into two terms:

$$\hat{w}_t = \hat{w}_t^{\text{erosion}} + \hat{w}_t^{\text{catch-up}}.$$

The first term, which we call *wage erosion*, is the impact of inflation shocks on real wages while holding each worker i's conflict decisions $\{\mathscr{I}_{i,t}\}_{t=0}^{\infty}$ as if the inflation were fixed at the steady state level. The second term, which we call *wage catch-up*, is the impact of inflation shocks on real wages through changes in each worker i's conflict decisions.

Formally, let $\omega_t\left(\boldsymbol{\pi_t}, \boldsymbol{\mathscr{I}_{i,t}}, h_{i,t}\right)$ denote worker i's real wage at time t for a given path of infla-

with the model, does not predict conflict conditional on the perceived wage gap (column 3). Without controlling for the perceived wage gap, higher perceived inflation does predict worker conflict decisions, consistent with the view that it lowers perceived wage gaps by increasing perceived conflict-induced nominal wage growth conditional on default nominal wage growth (column 4).

tion $\boldsymbol{\pi_t} = \{\pi_\tau\}_{\tau=0}^t$, conflict choices $\mathscr{I}_{\boldsymbol{i,t}} = \left\{\mathscr{I}_{i,\tau}\left(h_{i,\tau}, \boldsymbol{\pi}_\infty\right)\right\}_{\tau=0}^t$, and idiosyncratic history

$$h_{i,t} \equiv \left(\left\{z_{i,\tau}, \kappa_{i,\tau}\right\}_{\tau=0}^t, w_{i,-1}, w_{i,-1}^*\right).$$

Wage erosion measures how aggregate real wages would change in response to inflation shocks, holding conflict decisions fixed at their steady state value:

$$\hat{w}_t^{\text{erosion}} \equiv \int_0^1 \log \omega_t \left(\boldsymbol{\pi_t}, \mathscr{I}_{\boldsymbol{i,t}}^{\boldsymbol{ss}}, h_{i,t}\right) di - \int_0^1 \log \omega_t \left(\boldsymbol{\pi}^{\boldsymbol{ss}}, \mathscr{I}_{\boldsymbol{i,t}}^{\boldsymbol{ss}}, h_{i,t}\right) di. \tag{8}$$

Here, $\mathscr{I}_{\boldsymbol{i,t}}^{\boldsymbol{ss}} = \left\{\mathscr{I}_{i,\tau}^{ss} \equiv \mathscr{I}_{i,\tau}\left(h_{i,\tau}, \boldsymbol{\pi}^{\boldsymbol{ss}}\right)\right\}_{\tau=0}^t$ is what conflict decisions would have been, given steady-state inflation, as well as the same history of idiosyncratic shocks. Wage catch-up is the component of wage adjustment that results from changes in conflict choices due to inflation shocks:

$$\hat{w}_t^{\text{catch-up}} \equiv \int_0^1 \log \omega_t \left(\boldsymbol{\pi_t}, \mathscr{I}_{\boldsymbol{i,t}}, h_{i,t}\right) di - \int_0^1 \log \omega_t \left(\boldsymbol{\pi_t}, \mathscr{I}_{\boldsymbol{i,t}}^{\boldsymbol{ss}}, h_{i,t}\right) di. \tag{9}$$

We can now examine the impact of inflation shocks on aggregate worker welfare. From (4), we can decompose this impact into two components:

$$\hat{\mathscr{W}} = \underbrace{\sum_{t=0}^{\infty} \beta^t \hat{w}_t}_{\text{aggregate real wage response}} - \underbrace{\hat{\varkappa}}_{\substack{\text{aggregate costs of} \\ \text{inflation due to conflict}}}. \tag{10}$$

The first term captures the impact of inflation on the present value of aggregate real wages. The second term, the aggregate costs of inflation due to conflict, is given by

$$\hat{\varkappa} \equiv \int_0^1 \mathbb{E}\left[\sum_{t=0}^{\infty} \beta^t \kappa_{i,t} \left(\mathscr{I}_{i,t} - \mathscr{I}_{i,t}^{ss}\right)\right] di = \kappa \sum_{t=0}^{\infty} \beta^t \left(\text{frac}_t - \text{frac}^{ss}\right) \tag{11}$$

and captures how inflation shocks change the total conflict costs borne by workers. This term equals the utility cost per conflict multiplied by the change in the present value of the fraction of workers who engage in conflict due to inflation shocks. We now connect the two components of welfare change to the two components of wage adjustment, thereby presenting the main analytical result of the paper.

Theorem 1. *To first order, the impact of inflation shocks* $\{\hat{\pi}_t\}_{t=0}^{\infty}$ *on aggregate worker welfare is* *given solely by wage erosion,*

$$\hat{\mathscr{W}} \approx \sum_{t=0}^{\infty} \beta^t \hat{w}_t^{erosion} = \sum_{t=0}^{\infty} \beta^t \hat{w}_t - \sum_{t=0}^{\infty} \beta^t \hat{w}_t^{catch\text{-}up}, \tag{12}$$

because the welfare gains from wage catch-up due to conflict responses to inflation shocks are offset by the associated changes in conflict costs.

$$\hat{\varkappa} \approx \sum_{t=0}^{\infty} \beta^t \hat{w}_t^{catch\text{-}up}. \tag{13}$$

Equation (12) shows that the impact of inflation shocks on workers' welfare depends only on wage erosion. The benefits of wage catch-up from more frequent conflict are offset by the additional conflict costs, implying that, to first order, wage growth achieved through costly conflict is irrelevant for worker welfare. The result follows from the general envelope theorem in Milgrom and Segal (2002), which applies to discrete choices, i.e., workers' optimal choices of whether to engage in conflict with employers $\{\mathscr{I}_{i,t}\}_{t=0}^{\infty}$. The result also applies to an arbitrary sequence of inflation shocks (including deflationary shocks), regardless of their persistence.

To illustrate the intuition behind this theorem, consider a sequence of positive inflation shocks $\hat{\pi}_t \geq 0$ for all t. First, consider the infra-marginal workers whose conflict decisions are unaffected by inflation shocks because inflation shocks do not push their wage gaps over the conflict thresholds. Inflation shocks erode their real wages, and there is no wage catch-up because their conflict decisions remain unchanged. The impact of inflation shocks on their welfare is hence captured by the wage erosion term, which equals the impact of inflation shocks on their observed real wages.

Second, consider the marginal workers who switch from not engaging in conflict to engaging in conflict due to inflation shocks. These workers' wage gaps are pushed over the conflict thresholds as the inflation shocks erode their real wages. Before the (small) inflation shocks, these marginal workers were near the conflict thresholds and were approximately indifferent between engaging in costly conflict and accepting the default offer due to worker optimality. As a result, even though these workers experience positive wage catch-up due to conflict, the conflict costs of achieving these wage gains offset those gains. Consequently, the impact of inflation shocks on these marginal workers' welfare is still captured solely by the wage erosion term.

One consequence of Theorem 1 is that the impact of inflation shocks on worker welfare and real wages can differ significantly. Welfare depends solely on wage erosion, while changes in the real wage also reflect wage growth achieved through changes in conflict decisions. Even if the aggregate nominal wage keeps up with inflation—so that the impact of inflation shocks on the aggregate real wage $\sum_{t=0}^{\infty}\beta^t\hat{w}_t$ is close to zero—inflation can still harm worker welfare if workers must engage in costly conflict more frequently for the aggregate nominal wage to keep up with inflation. As a result, measuring worker welfare using observed wage growth understates the costs of inflation.

Only in the special case of our model with time-dependent wage setting is the impact of inflation shocks on the aggregate real wage sufficient to capture their impact on worker welfare. In this case, with $\lambda > 0$ and $\kappa \to \infty$, Theorem 1 still holds. Conflict $\mathscr{I}_{i,t} = 1$ if and only if the exogenous free catch-up opportunity arrives. As a result, conflict decisions $\{\mathscr{I}_{i,t}\}_{t=0}^{\infty}$ are invariant to inflation shocks: both the aggregate costs of inflation due to conflict, $\hat{\varkappa}$, and the wage-catch up term, $\hat{w}_t^{\text{catch-up}}$ in Equation (9), are zero, since they arise only from how inflation shocks change conflict decisions.

The theorem focuses on the first-order impact of inflation shocks on worker welfare. For large shocks, and taking into account non-linearity, Theorem 1 does not hold exactly because some workers would strictly prefer to engage in conflict as inflation shocks push them over the conflict threshold. However, the general lesson remains the same. Workers have to engage in costly conflict to achieve wage gains. Therefore, the impact of inflation shocks on worker welfare differs from the impact on real wages and the aggregate cost of inflation due to conflict can be significant. This lesson can be seen from the decomposition of inflation shocks' impact on worker welfare in (10), which does not rely on a first-order approximation. In fact, if the inflation shock becomes very large, the aggregate costs of inflation due to conflict are the sole component of the overall costs of inflation to workers: eventually, every worker engages in conflict, leading to large aggregate costs of inflation due to conflict without declines in real wages after inflation shocks.

What determines the magnitude of wage erosion, and as such the impact of inflation shocks on worker welfare? The following proposition links wage erosion to two factors: first, the indexation of the default wage; and second, the frequency of conflict at steady-state inflation. We capture the frequency of conflict at steady-state inflation by the fraction of workers who, at steady state, do not engage in conflict from the current period onward for k periods, $\Phi_k^{ss} \equiv \int_0^1 \left(\Pi_{s=0}^k \left(1-\mathscr{I}_{i,t+s}^{ss}\right)\right) di$—that is, the probability that the employer's default wage offer "survives" without conflict over these periods. When conflict is frequent, the survival probability is low.

Proposition 2. *To first order, wage erosion and the impact of inflation shocks on worker welfare are given by*

$$\hat{w}_t^{erosion} = -\left(1-\gamma\right)\sum_{s=0}^{t}\Phi_{t-s}^{ss}\hat{\pi}_s \quad \forall t \geq 0 \quad \textit{and} \quad \hat{\mathscr{W}} \approx -\left(1-\gamma\right)\sum_{s=0}^{\infty}\beta^s\left(\sum_{k=0}^{\infty}\beta^k\Phi_k^{ss}\right)\hat{\pi}_s, \tag{14}$$

The proposition shows that given inflation shocks, wage erosion is a function only of the indexation of the default wage (γ) and the frequency of conflict in steady state as measured by the survival probability $\{\Phi_k^{ss}\}$. The impact on welfare, being the present value of wage erosion, depends on the same two factors. Welfare costs of inflation shocks are smaller when indexation is high—in the extreme case of full indexation ($\gamma = 1$), inflation shocks do not lead to any wage erosion. Welfare costs are also smaller when conflict is more frequent at steady-state inflation, meaning survival probabilities are low.

Intuitively, imagine a worker who did not engage in conflict between periods s and t at steady state. For such a worker, the inflation shock $\hat{\pi}_s$ lowers their real wage at t by $\left(1-\gamma\right)\hat{\pi}_s$. The term $1-\gamma$ captures the fact that the inflation shock may not lower real wages one-for-one even without conflict because of the indexation of the default wage. Suppose instead that the worker would engage in conflict between periods s and t at steady state. Then, $\hat{\pi}_s$ does not lower their real wage at t, because conflict allowed their nominal wage to fully catch up with inflation $\hat{\pi}_s$. Summing across workers, $\hat{\pi}_s$ erodes aggregate real wage at t by $\left(1-\gamma\right)\Phi_{t-s}^{ss}\hat{\pi}_s$. Summing over inflation shocks in all periods, we arrive at the expression for wage erosion in (14). The impact of inflation shocks on worker welfare then follows from (12).

The main value of Proposition 2 is to clarify how key parameters of the model determine the welfare costs of inflation shocks. First, a higher conflict cost κ means that workers engage in conflict less frequently at steady state, which raises the survival probabilities of the employer's default wage offer $\{\Phi_k^{ss}\}$. Therefore, a higher conflict cost increases the magnitude of wage erosion and raises the welfare costs of inflation shocks. Similarly, a lower probability of free wage catch-up λ or a higher growth rate of the default nominal wage at steady state α also raises the survival probabilities $\{\Phi_k^{ss}\}$ and, hence, the magnitude of wage erosion and the welfare costs of inflation shocks. Finally, higher indexation γ increases the employer's default wage offer after inflation shocks, which lowers the magnitude of wage erosion and the welfare costs of inflation shocks. Guided by the proposition, we design survey hypotheticals to directly measure these parameters in Section 5.

4.3 Extensions

To focus on the key economics and quantify our survey evidence in a simple manner, our baseline model captures conflict in a reduced-form way and focuses on the extensive margin of conflicts. This framework deliberately abstracts from certain specific features of conflict behavior documented in Section 3. In Appendix Section C.1, we develop theoretical extensions of the baseline model that incorporate some of these features. We show that the main result stated in Theorem 1 continues to hold in these extensions, a robustness that stems from the general applicability of the envelope theorem in Milgrom and Segal (2002).

First, Theorem 1 does not depend on the "Calvo-plus" assumption, but also holds for general distributions of conflict costs with non-negative supports. Second, Theorem 1 also holds if we focus on the intensive margin of conflict—allowing conflict costs to scale with wage gains from conflict. We study a model akin to Rotemberg costs in price setting: a worker engaging in conflict endogenously chooses how much to raise their wage $w_{i,t}$ beyond the default offer $w^d_{i,t}$, incurring a utility cost of $\frac{\kappa}{2}\left(\log w_{i,t} - \log w^d_{i,t}\right)^2$. The impact of inflation shocks on aggregate worker welfare is still given by wage erosion, namely the impact of inflation shocks on workers' real wages when their conflict decisions, here given by the intensity of conflict $\log w_{i,t} - \log w^d_{i,t}$, are held at the steady-state level. We also study a case in which a worker makes an intensive-margin labor supply decision, which maps directly to the hard-work option in Panel B of Figure 1. In this case, the impact of inflation shocks on aggregate worker welfare is given by "pay erosion," defined as the effect of inflation shocks on workers' total real pay if their labor supply is held at the steady-state level. Third, Theorem 1 extends to the case in which the worker does not have log utility and/or faces a standard borrowing constraint, provided each worker's wage erosion in (12) is appropriately weighted by their marginal utility.

In our baseline model, the conflict-induced (real) wage $w^*_{i,t}$ is exogenous and invariant to inflation shocks. However, Theorem 1 also extends to the case where $w^*_{i,t}$ comoves with inflation shocks and/or is endogenously determined, for example, based on the state of the labor market (as further explored in Appendix Sections C.3 and C.4).[14] In this case, (12) still holds, with the formula for wage erosion—still defined as how inflation shocks would affect workers' real wages if their conflict decisions were held at the steady state—given by:

$$\hat{w}_t^{\text{erosion}} = -\left(1-\gamma\right)\sum_{s=0}^{t}\Phi_{t-s}^{ss}\hat{\pi}_s + \sum_{s=0}^{t}\left(1-\Phi_{t-s}^{ss}\right)\hat{g}_{w,s}, \tag{15}$$

where $g_{w,s} \equiv \log\left(w_s^*/w_{s-1}^*\right)$ is the growth rate of aggregate conflict-induced (real) wages $\log w_s^* \equiv \int_0^1 \log w_{i,s}^* di$, and deviations from their steady-state values are still denoted by hats. Compared to (14), the additional term captures how changes in conflict-induced real wages affect workers' real wages when their conflict decisions are held at the steady state. Finally, as we discuss in Section 6.3 and Appendix Section C.3, Theorem 1 also holds when inflation is endogenously determined in general equilibrium, driven by either aggregate supply or demand shocks.

Three meaningful directions lie beyond the scope of the current paper. First, one could formally model costly on-the-job search and study how inflation affects those costs, as in Afrouzi et al. (2025) and Pilossoph et al. (2024). Second, one could introduce firm optimization and allow firms to endogenously choose the default wage contract (e.g., optimize γ and α). Third, one could introduce endogenous separation and study how it is influenced by inflation, as in Blanco et al. (2025a).

5 Using the Survey to Calibrate Key Model Parameters

As we have discussed, several model parameters determine the extent to which conflict affects the costs of inflation: how much workers dislike taking actions to increase their wages (i.e., the utility cost to each worker of engaging in conflict κ); the probability of free wage catch-up λ; the degree of indexation of employers' default wage offers γ; and the growth rate of the default

[14] In our baseline model, all workers are employed. In Appendix Section C.4, we extend the model to allow for unemployment, determined endogenously in general equilibrium through random matching in the Diamond–Mortensen–Pissarides tradition. Inflation can "grease the wheels of the labor market" (Blanco and Drenik, 2023) by increasing overall employment in general equilibrium. This channel increases worker welfare through both higher employment rates and the upward pressure these exert on wages in general equilibrium. But even in this extended setting, aggregate costs of inflation due to conflict remain significant, both in absolute value and as a share of the overall costs of inflation.

nominal wage at steady state inflation α. This section uses the second part of our survey, based on custom-designed hypothetical questions, to measure these parameters.

We use those survey hypotheticals to measure key parameters (instead of relying on the first part of the survey based on workers' experiences in 2023) to abstract from the specific context of the survey—namely, the high inflation of 2023 and the actions that workers took in response. As such, our parameter estimates are less affected by the specific context associated with the motivating evidence in Section 3.[15] An alternative approach would be to infer these conflict costs indirectly by calibrating a model to match moments of the wage growth distribution, as in the menu-cost literature (e.g., Alvarez et al., 2016). However, in our model, wage growth may arise from either conflict or default wage increases governed by α and γ. One cannot easily differentiate conflict-induced wage growth from default wage growth in the data, which makes it challenging to map the distribution of wage growth to conflict costs.

5.1 Conflict Costs

We first measure the fraction of their wages that workers would sacrifice to avoid conflict with their employers. As we discuss below, this object maps one-to-one to the conflict threshold $\mathbb{T}$ and hence the conflict cost κ in the model. To measure it, we proceed in two steps. First, we elicit the conflict-induced nominal wage growth in the next 12 months, that is, the wage growth workers believe they could secure from their employer if they took costly actions, ΔW^*. Second, we elicit the default nominal wage growth in the next 12 months at which workers are indifferent between accepting their employer's default wage offer versus choosing to take costly action, ΔW^{indiff}. The difference, $\Delta W^* - \Delta W^{\text{indiff}}$, measures the fraction of their wages that workers would sacrifice to avoid conflict with employers.

The elicited fraction of wages that workers would sacrifice to avoid conflict, $\Delta W^* - \Delta W^{\text{indiff}}$, maps directly to the conflict threshold $\mathbb{T}$ in our model. To see this, note that the difference between the default nominal wage growth ΔW^d and the conflict-induced nominal wage growth ΔW^* over the same horizon captures the wage gap of the default wage offer, $x^d = \Delta W^d - \Delta W^*$. In the model, for a worker without a free wage catch-up opportunity, if the wage gap x^d is suffi-

[15] A literature (e.g., Barsky et al., 1997; Falk et al., 2023) shows that answers to well-designed hypothetical survey questions are stable and predictive of incentivized or real-life decisions. However we caution that fully separating respondents from their recent experience, even with well designed hypothetical questions, is challenging.

Figure 5: Survey Question to Elicit Indifference Nominal Wage Growth ΔW^{indiff}

	I would accept my employer's pay growth offer	I would do my best using any strategies at my disposal to increase my pay further
Employer offers you pay growth of 4%	○	○
Employer offers you pay growth of 3.5%	○	○
Employer offers you pay growth of 3%	○	○
Employer offers you pay growth of 2.5%	○	○
Employer offers you pay growth of 2%	○	○
Employer offers you pay growth of 1.5%	○	○
Employer offers you pay growth of 1%	○	○
Employer offers you pay growth of 0.5%	○	○
Employer offers you pay growth of 0%	○	○

Notes: this figure contains the question from the survey eliciting the indifference nominal wage growth, ΔW^{indiff}. For each hypothetical default nominal wage growth offered by the employer, respondents are required to choose whether they would accept the offer or take costly actions to achieve a higher wage growth. Respondents first answer a question that reveals their conflict-induced nominal wage growth, ΔW^*: "[c]ommon strategies to increase pay include initiating a difficult conversation about pay with employers, or searching for higher paid jobs with other employers. Please, think ahead to 12 months from now. Suppose that you are working at the same job at the same place you currently work, and working the same number of hours. What pay growth do you think you would get if you do your best to increase pay using any strategies at your disposal, including the common strategies listed above?". In order to elicit the indifference nominal wage growth ΔW^{indiff}, respondents then answer the question "[y]our employer increases pay for everyone in your position, including you, by z% (possible values listed below). Would you accept your employer's offer without taking any actions to increase your pay or would you do your best to increase your pay using any strategies at your disposal (such as initiating a difficult conversation about pay with employers, or searching for higher paid jobs with other employers)? Remember that you have said that if you do your best to increase pay using any strategies at your disposal, you would have a pay growth of y%." Here, y is their answer to the previous question.

ciently negative ($x^d < -\mathbb{T}$, where $\mathbb{T} > 0$ is the conflict threshold), the worker engages in conflict. If the wage gap is less negative ($x^d > -\mathbb{T}$), the worker does not engage in conflict. At the conflict threshold ($x^d = -\mathbb{T}$), the worker is indifferent between accepting the default wage offer and engaging in conflict. As a result, when the default nominal wage growth is equal to the indifference nominal wage growth, $\Delta W^d = \Delta W^{\text{indiff}}$, we have $x^d = \Delta W^{\text{indiff}} - \Delta W^* = -\mathbb{T}$. So, $\Delta W^* - \Delta W^{\text{indiff}}$ equals the conflict threshold $\mathbb{T}$. We then use the conflict threshold $\mathbb{T}$ to pin down the conflict cost parameter κ.[16]

To elicit the indifference nominal wage growth, ΔW^{indiff}, we adapt the standard "multiple price lists for willingness to pay elicitation" used in experimental economics (e.g., Jack et al.,

[16]Formally, let $v^{ss}(x)$ denote the worker's value given its end-of-period wage gap in (7) at steady state. That is, $v^{ss}(x) \equiv x + \max_{\{\mathscr{I}_{i,t}\}_{t=1}^{\infty}} \mathbb{E}\left[\sum_{t\geq 1} \beta^t \left(x_{i,t} - \kappa_{i,t}\mathscr{I}_{i,t}\right) | x_{i,0} = x\right]$, subject to (5) and $\pi_t = \pi^{ss}$ for all t. One can then use the conflict threshold $\mathbb{T}$ to pin down the conflict cost parameter κ : $v^{ss}(0) - \kappa = v^{ss}(-\mathbb{T})$. See Appendix Section C.2 for additional details about the mapping between our elicitation and the model.

2022). Based on the reported conflict-induced nominal wage growth ΔW^*, we constructed a menu of default nominal wage growth options where the maximum wage growth is ΔW^* and the minimum is ΔW^* minus 4 percentage points, with a gradient of 0.5 percentage points. Figure 5 shows this menu for an example in which the respondent reported $\Delta W^* = 4\%$. For each hypothetical default nominal wage growth in the menu, we asked participants whether they would accept the default offer or take actions to achieve higher wage growth.[17] In the top row, employers offer a default nominal wage growth equal to the conflict-induced nominal wage growth. If conflict is costly, workers should always accept the default offer. In the bottom row, the employer's default nominal wage growth offer is much lower than the conflict-induced nominal wage growth, so workers should choose conflict unless the costs are prohibitively large. At some intermediate default nominal wage growth hypothetically offered by the employer, workers should switch between accepting and engaging in conflict. The default nominal wage growth at which conflict decisions switch bounds the worker's indifference nominal wage growth, ΔW^{indiff}, within a 0.5% interval. Specifically, letting ΔW^{accept} denote the lowest default nominal wage growth in the menu at which respondents accept the employer's default offer, we have $\Delta W^{\text{indiff}} \in \left[\Delta W^{\text{accept}} - 0.5\%,\ \Delta W^{\text{accept}}\right]$ and the conflict threshold

$$\mathbb{T} \in \left[\Delta W^* - \Delta W^{\text{accept}},\ \Delta W^* - \Delta W^{\text{accept}} + 0.5\%\right]. \tag{16}$$

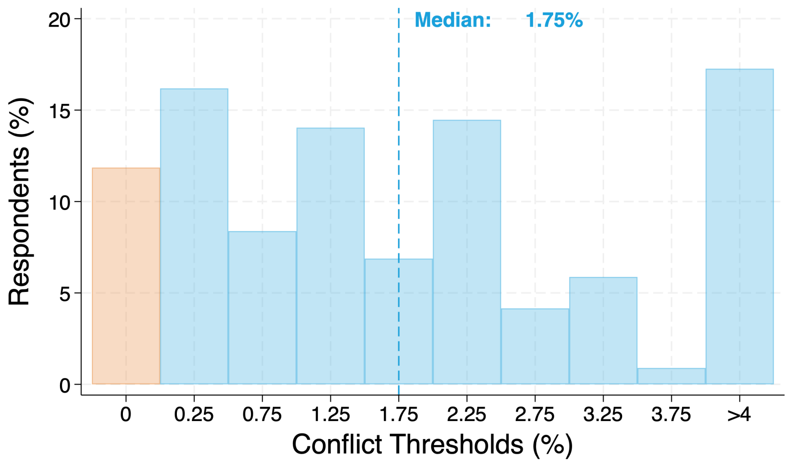
We set $\mathbb{T}$ at the median of the interval. For those who would take costly actions at all default wage offers, we assign a $\mathbb{T}$ of zero. For those who would never take actions that put them in conflict with their employer, we know that $\mathbb{T}$ exceeds 4% but cannot provide a point estimate. We summarize conflict thresholds using the median of the cross-respondent distribution to avoid measuring values of $\mathbb{T}$ above 4%.[18]

Figure 6 illustrates the full distribution of elicited conflict thresholds $\mathbb{T}$ in our sample. The conflict thresholds are large and heterogeneous. Conditional on having a positive $\mathbb{T}$, the median worker would sacrifice 1.75% of their wages in order to avoid taking costly actions that put them

[17] We randomized whether the menu was ascending or descending, and whether accepting or conflicting is ordered first, which means that the average results are unaffected by any anchoring due to page location. Fortunately, we find that the cost of conflict is the same across groups, meaning order is not important.

[18] The only group of respondents for whom we do not define conflict thresholds throughout the analysis is those who give non-monotone responses, which reassuringly correspond to less than 7% of the sample.

Figure 6: Distribution of Conflict Thresholds Elicited from Survey



Note: this figure illustrates the distribution of elicited conflict thresholds $\mathbb{T}$ showing the percentage of participants with each discrete value. $\mathbb{T}$ is defined as the difference between the conflict-induced nominal wage growth (ΔW^*) and their indifference nominal wage growth (ΔW^{indiff}), the default nominal wage growth at which workers are indifferent between accepting their employer's default wage offer versus taking costly action. Specifically, we set $\mathbb{T}$ at the median of the interval in (16). The data exclude respondents who give non-monotonic responses. The median elicited conflict threshold, conditional on being positive, is highlighted in the figure. The right-most column contains all respondents with a elicited conflict threshold of more than 4%.

in conflict with their employer.[19] We find substantial dispersion around this median value of $\mathbb{T}$, with more than 15% of the sample being willing to sacrifice at least 4 percent of their wages to avoid conflict. While there is substantial dispersion in what workers are willing to sacrifice to avoid conflict, we do not find much systematic heterogeneity across worker demographics or income (See Appendix Figure B.1.)[20,21] In our baseline model, we calibrate κ so that $\mathbb{T}$ =

[19]As discussed above, we measure the conflict threshold $\mathbb{T}$ based on workers who do not have a free wage catch-up opportunity and have a non-zero conflict cost. So, we report the median elicited $\mathbb{T}$ conditional on it being positive.

[20]To assess magnitudes, one useful comparison is union dues, which approximate how much workers pay to avoid direct conflict with employers. Union dues are generally between 1-2% of wages per year. For example, dues for the Service Employees International Union (health care, 1.9 million members) were 1.7%, and United Auto Workers (auto manufacturing, 1 million members) were approximately 1.1%.

[21]In Appendix Section D.1, we show that the elicited conflict threshold $\mathbb{T}$ is increasing in the conflict-induced nominal wage growth ΔW^*. One explanation could be heterogeneity in respondents' conflict costs. Intuitively, workers with higher conflict costs and higher thresholds $\mathbb{T}$ engage in conflict less frequently. Therefore, on average, their conflict-induced nominal wage growth ΔW^* is higher. Section 6.3 and Appendix Section D.2 evaluate this possibility in an extension of our baseline model, and finds that this extension accounts well for the relationship between conflict-induced nominal wage growth and elicited conflict thresholds. A second explanation for this pattern is forms of reference dependence in workers' conflict decisions, such as an aversion to nominal wage cuts.

1.75%. In Appendix Section D.2, we consider an extension of the baseline model which allows for cross-sectional heterogeneity in conflict costs, capturing the dispersion in the elicited conflict thresholds documented in Figure 6 and show that results are similar.

Finally, 11.90% of respondents report that they would always engage in conflict, irrespective of the employer's offer (the leftmost orange bar in Figure 6). These workers perceive that conflict is costless, which we map to the probability of a free wage catch-up in our model λ. In our quarterly calibration, we translate this yearly share into a quarterly free wage catch-up opportunity with probability $\lambda = 1-(1-0.119)^{1/4} = 3.12\%$.

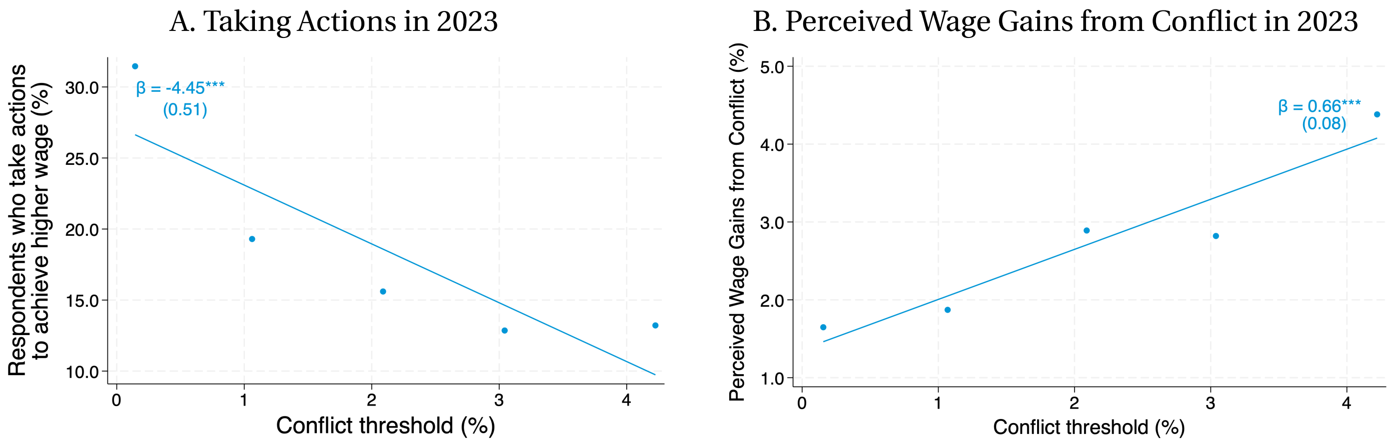
Our measure of $\mathbb{T}$ is derived from hypotheticals, but reassuringly, the cross-sectional variation is consistent with respondents' self-reported actions in 2023. We provide two pieces of evidence. First, respondents with a higher conflict threshold $\mathbb{T}$ elicited in hypotheticals (more averse to conflict) were less likely to engage in conflict in 2023. We see this in the left panel of Figure 7, where there is a strong negative relationship between the fraction of respondent who took actions in 2023 on the y-axis and their elicited $\mathbb{T}$ on the x-axis. In Appendix Table B.5, we further verify that the elicited $\mathbb{T}$ still negatively predicts the likelihood of worker conflict in 2023, after controlling for their perceived inflation and perceived wage gap in 2023.

Second, as we would expect, among respondents who did not engage in conflict in 2023, those with a higher elicited conflict threshold $\mathbb{T}$ perceived that they would have gained more wage growth through conflict in 2023. Specifically, the right panel of Figure 7 shows that, for respondents who accepted the default wage offer in 2023, those with higher $\mathbb{T}$ (most averse to conflict) have larger perceived wage gains from conflict (defined as the difference between their perceived nominal wage growth if they had taken costly actions in 2023 and the nominal wage growth of their employer's default wage offer that they accepted in 2023).[22] Together, these cross-sectional patterns show consistent answers across sections of the survey and increase our confidence that the elicited conflict thresholds predict worker behavior.

Appendix Section D.3 provides some evidence that aversion to nominal wage cuts is one force that tends to lower our elicited conflict thresholds.

[22] Perceived wage gains from conflict corresponds to $-x^d$ in the model, that is, the negative of the wage gap implied by the employer's default wage offer.

Figure 7: Validating Elicited Conflict Thresholds



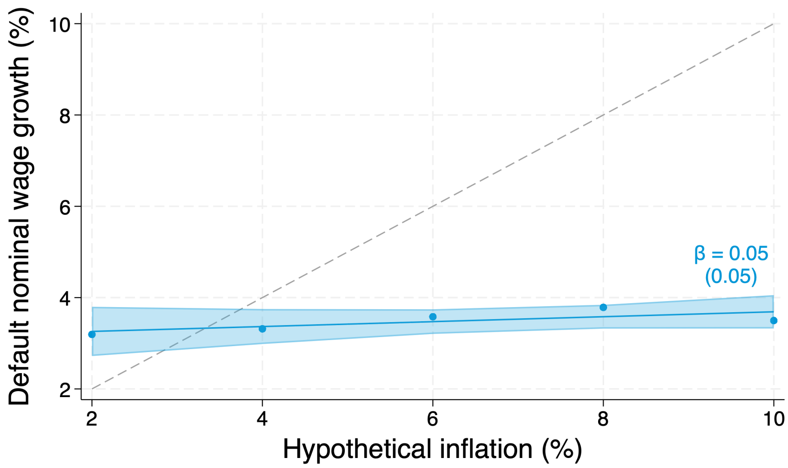
Note: Panel A shows the relationship between the elicited conflict threshold ($\mathbb{T}$), based on the hypotheticals in Figure 5, and an indicator for whether the respondent took actions to achieve higher wage growth in 2023. Panel B is restricted to respondents who accepted their employer's default wage offer in 2023 and shows the relationship between their elicited conflict threshold ($\mathbb{T}$) and perceived wage gains from conflict (defined as the difference between their perceived conflict-induced nominal wage growth had they taken costly actions in 2023 and the nominal wage growth of the employer's default wage offer they accepted in 2023). In Panel B, the perceived wage gains are trimmed at the 1st and 99th percentile. In both panels, we include those respondents with $\mathbb{T} > 4\%$, assigning them a value of 4.25%, and we exclude respondents who give non-monotonic responses in the elicitation of $\mathbb{T}$. The coefficients of these relationships are displayed, with robust standard errors enclosed in parentheses. Stars denote levels of statistical significance: 1% (***), 5% (**), and 10% (*). See Appendix Figure B.6 for robustness to including a control for conflict-induced nominal wage growth ΔW^*.

5.2 Default Nominal Wage Growth and Inflation

The framework in Section 4 shows that the aggregate costs of inflation due to conflict depend on how much the default nominal wage adjusts with inflation, captured by γ. This object is hard to measure in observational data, since one cannot easily distinguish between conflict-induced nominal wage growth and default nominal wage growth offered by an employer. Instead, we elicit the degree of indexation of default wage offers to inflation using survey hypotheticals. Similar to Section 3, we randomly assign participants into a hypothetical scenario in which inflation is expected to be 2%, 4%, 6%, 8% or 10% over the next 12 months. We then asked survey respondents what default nominal wage growth employers would offer them in that setting.

Figure 8 shows that workers perceive that employers would offer almost the same default nominal wage growth at all levels of inflation. The y-axis is default nominal wage growth that workers expect their employer to offer. The x-axis is hypothetical inflation scenario. For reference, we also plot the 45-degree line, which reflects the slope of fully indexed default nominal wage growth to inflation. The blue circles plot the mean default nominal wage growth expected by the respondents in the scenario that was posed to them. The regression line, with shaded 95% confidence intervals, has a slope of 0.05, but is not statistically significantly different from

Figure 8: Default Nominal Wage Growth and Inflation



Note: This binned scatterplot depicts the relationship between the default nominal wage growth respondents reported they would receive under a hypothetical inflation scenario and the hypothetical inflation rate, along with the 95% confidence interval of the predicted relationship. The gray dashed line serves as a reference 45-degree line. The coefficient of this relationship is displayed, with the standard errors enclosed in parentheses. The stars indicate levels of statistical significance: 1% (***), 5% (**), and 10% (*). The sample is all respondents. Respondents answered the following question: "Consider a hypothetical situation in which inflation is expected to be π in the next 12 months. Suppose that you are working at the same job at the same place you currently work, and working the same number of hours. What pay growth do you think you would get by default if you do not take any strategies at your disposal to increase your pay (such as initiating a difficult conversation about pay with employers, or searching for higher paid jobs with other employers)?" The hypothetical inflation scenario is $\pi = 2\%, 4\%, 6\%, 8\%$ and 10%.

zero. The slope implies that workers believe a 1 percentage point increase in inflation leads to a 0.05 percentage point increase in employers' default wage offers, absent conflict.[23] We calibrate $\gamma = 0.05$ based on this slope. Note that this slope captures perceived default wage indexation, which could be lower than actual default wage indexation. In our numerical exercises, we also explore robustness to much higher levels of γ than our baseline survey estimates.

Finally, Figure 8 also shows that workers perceive employers would offer them a default nominal wage annual growth of 3.25% at steady-state inflation (2% annually), which directly maps to α in the model, i.e., the growth rate of the default nominal wage at steady state inflation. Specifically, this implies a quarterly value of $\alpha = 0.81\%$, which means workers receive periodic default wage increases at steady-state inflation.

[23]We find similar results when relating the default nominal wage growth over the next 12 months that workers expect their employers to offer to the inflation they expect over the next 12 months (Appendix Figure B.7).

6 Quantifying How Conflict Affects the Costs of Inflation

In this section, we use the model developed in Section 4 to map the survey evidence in Section 5 into the costs of inflation for workers. This allows us to quantitatively assess how much incorporating conflict matters for these costs. We find that the costs of inflation incorporating conflict are significantly larger than the costs of inflation via falling real wages alone.

6.1 Calibration

We calibrate the model from Section 4 at a quarterly frequency and summarize the parameters in Table 2. As we discussed above, we use our survey to measure the costs of conflicts ($\lambda = 3.12\%$ and $\kappa = 7.97\%$ such that $\mathbb{T} = 1.75\%$), the degree of indexation of the default wage to inflation shocks ($\gamma = 0.05$), and the growth rate of the default nominal wage at steady state inflation ($\alpha = 0.81\%$). Furthermore, for the quarterly calibration, we set the discount factor to a standard value, $\beta = 0.99$. The trend productivity growth rate $g = 0.76\%$ is chosen to map a steady-state average annual growth rate of real wages of 3.02% in the ASEC-CPS survey.[24] We assume $\pi^{ss} = 0.5\%$, implying a steady-state annual inflation of 2%, again a standard value.

We assume that the idiosyncratic productivity shock is such that $z_{i,t} + \mu$ follows a Gamma (a, b) distribution, a flexible continuous distribution with support $[0, \infty)$.[25] We calibrate the shape and scale parameters of the Gamma distribution $(a, b) = (0.13, 0.03)$ such that idiosyncratic shocks have a mean of zero, $\mathbb{E}\left[z_{i,t}\right] = 0$, and the yearly share of workers engaging in conflict at steady-state inflation is equal to 48%, as in Panel B of Figure 4.[26] As in standard menu cost models, the distribution of idiosyncratic shocks impacts how workers' wage gaps move and thus the fre-

[24] We access ASEC-CPS data from the IPUMS CPS database (Flood et al., 2023).

[25] As assumed in the theory section, setting the lower bound of the idiosyncratic productivity shock to $\underline{z} = -\mu$ ensures that the steady-state distribution of wage gaps has non-positive support.

[26] This choice is conservative in terms of the aggregate costs of inflation due to conflict. Alternatively, we can calibrate to the 21% of workers who chose conflict in 2023 (Panel A of Figure 1), which we study in Appendix Section C.6. Our choice in the main text is conservative because it implies that a higher share of workers already engage in conflict each year in steady state, resulting in smaller aggregate costs of the inflation shock due to conflict. The difference in the fraction of workers between Panel B of Figure 4 and Panel A of Figure 1 can arise because workers who already engaged in conflict in 2022, when inflation peaked, were less likely to engage in conflict again in 2023. Alternatively, it could be that conflict in practice is less frequent than in hypothetical questions, as workers might underestimate the monetary, time, and psychological costs of conflict.

Table 2: Main Analysis—Calibration

	Description	***Value***	***Target***
β	Discount factor	0.99	Standard
κ	Conflict cost	7.97%	Own survey such that $\mathbb{T} = 1.75\%$
λ	Probability of free catch-up	3.12%	Own survey
g	Trend real wage growth	0.76%	ASEC-CPS 3.02% annual real wage growth
α	Default nom. wage growth at steady state inflation	0.81%	Own survey
γ	Indexation of default nominal wage	0.05	Own survey
π^{ss}	Steady state inflation	0.5%	2% annual inflation
$z_{i,t}$	Idios. shocks $z_{i,t} + \mu \sim \text{Gamma}(a, b)$	$(0.13, 0.03)$	$\mathbb{E}\left[z_{i,t}\right] = 0$ 48% yearly share of conflict

quency of conflict. As a result, the share of workers engaging in conflict at steady state inflation is informative about the distribution of idiosyncratic productivity shocks, which in turn impacts the costs of inflation shocks through Proposition 2.

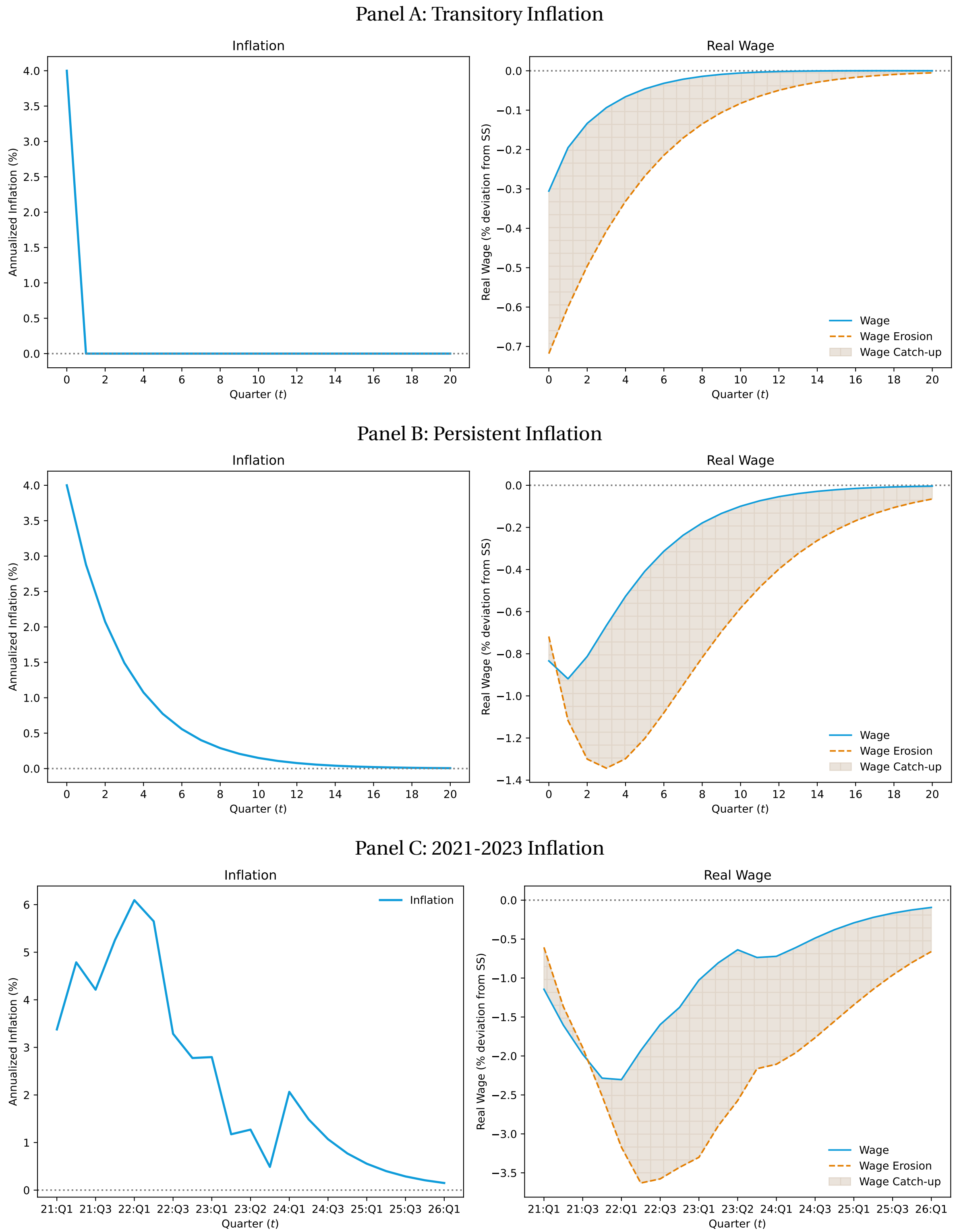
6.2 Quantifying the Aggregate Costs of Inflation Due to Conflict

We use the calibrated model to quantify the welfare costs of inflationary shocks to workers. We solve for the first-order impact of inflation shocks $\{\hat{\pi}_t\}_{t=0}^{\infty}$ using Sequence-Space Jacobian methods, developed in Auclert et al. (2021) and Auclert et al. (2024). This approach allows us to analyze the welfare consequences of an arbitrary path of inflation.

We consider three inflationary scenarios in this subsection, plotted in the left figure of each panel of Figure 9. The first scenario is a transitory inflation shock (Figure 9, Panel A), in which we set $\hat{\pi}_0 = 1\%$ and $\hat{\pi}_t = 0$ for $t \geq 1$. The second scenario is a persistent inflation shock (Figure 9, Panel B), in which we set $\hat{\pi}_t = \rho^t \cdot 1\%$ with $\rho = 0.72$, which matches the empirical auto-correlation of inflation in the US time series (specifically, the auto-correlation of quarterly PCE inflation between 2013Q1 and 2024Q1). The third scenario is based on the post-pandemic inflation of 2021–2023 (Figure 9, Panel C).[27] As in Section 4, an unexpected aggregate inflation shock is realized at $t = 0$, and workers have perfect foresight about the path of inflation afterwards.

[27] Specifically, we study inflation shocks based on the difference between the headline Personal Consumption Expenditures (PCE) Inflation between January 2021 and December 2023 (quarterly frequency, but annualized), and steady-state inflation 2%. Following December 2023, we assume that inflation converges back to steady state at a rate of $\rho = 0.72$.

Figure 9: Real Wage Dynamics and the Aggregate Costs of Inflation due to Conflict



Notes: each panel plots the response to a given inflation scenario. In Panel A, there is a transitory shock to inflation lasting one quarter. In Panel B, there is a persistent shock, that decays at quarterly rate $\rho = 0.72$. In Panel C, the shock to inflation is given by annualized headline PCE inflation over 2021–2023, after subtracting the steady state inflation based on the historical mean inflation. In the left figure of each panel, we plot the path of annualized inflation shock. In the right panel, we plot the percent deviation of the real wage from the steady state in the solid blue line. We also plot wage erosion in the dashed orange line, which captures the impact of inflationary shocks on worker welfare. The gap between the two lines, shaded in gray, represents wage catch-up achieved through more frequent conflict.

Table 3: Decomposing the Impact of Inflation Shocks on Worker Welfare

	Overall Welfare Impact	**Real Wage Response**	**Impact due to Conflict**
Transitory inflation	−0.93%	−0.23%	−0.70%
Persistent inflation	−3.23%	−1.32%	−1.91%
2021-2023 inflation	−10.64%	−4.95%	−5.68%

Notes: the first column shows the overall impact on worker welfare after the transitory inflation shock (row 1), the persistent inflation shock (row 2), and the 2021-2023 inflation (row 3), as a percent of annual consumption. The second column shows the response of the present value of real wages in each scenario, again as a percent of annual consumption. The final column shows the welfare impact from aggregate costs of inflation due to conflict, $-\hat{\varkappa}$, again as a percent of annual consumption.

The right figure of each corresponding panel shows the dynamic response of real wages and wage erosion under each scenario, with the latter being relevant for welfare. For each scenario, the solid blue line displays the overall real wage response $\{\hat{w}_t\}_{t=0}^{\infty}$. The dashed orange line displays the resulting wage erosion $\left\{\hat{w}_t^{\text{erosion}}\right\}_{t=0}^{\infty}$. The shaded region captures the gap between the two, i.e., wage catch-up due to more frequent conflict $\left\{\hat{w}_t^{\text{catch-up}}\right\}_{t=0}^{\infty}$. The total area of the shaded region then captures the present value of wage catch-up due to conflict and measures the aggregate cost of inflation due to conflict, $\hat{\varkappa}$, defined in (11).

For the transitory inflation shock, real wages fall by around 0.3% on impact. However, the welfare-relevant wage erosion falls by more than 0.7%, meaning that the modest fall in real wages is mostly because workers engage in conflict more frequently to raise their wages. For the persistent inflation shock with $\rho = 0.72$, real wages and welfare-relevant wage erosion fall roughly equally on impact. However wage erosion falls significantly more than real wages in subsequent quarters. Therefore, there is a large but delayed wage catch-up to the inflation shock through more frequent conflicts in later quarters. The delay occurs because workers have incentives to delay conflict when the inflation shock is persistent. Even if they engage in conflict now so that their wages keep up with the initial inflation, the persistent inflation shock still causes their real wages to fall in the absence of future conflict. As a result, workers can economize on conflict costs by delaying conflict until inflation has accumulated. For 2021-2023 inflation, which peaked in 2022, there is again a large but delayed gap between real wages and wage erosion. Overall, in all cases, the shaded region between real wages and wage erosion is large, meaning a substantial fraction of the wage growth was achieved through costly conflict and the aggregate costs of inflation due to conflict are large.

Table 3 confirms the importance of conflict for the welfare costs of inflation. The table displays the welfare costs of inflation to workers and decomposes them into real wage responses and the aggregate costs of inflation due to conflict, according to (10). In the table, welfare units are denoted in terms of percent of annual consumption. For all inflationary scenarios, we find that the costs of inflation to workers, incorporating conflict costs, are more than twice the costs that arise from falling real wages alone. For example, for the persistent inflation shock with $\rho = 0.72$, the overall welfare costs of inflation to workers are 3.23% of annual consumption. The aggregate costs of inflation due to conflict are 1.91%, constituting 59% of the total costs.[28] For 2021-2023 inflation, aggregate costs of inflation due to conflict constitute 53% of the total costs.

One unique feature of the 2021-2023 inflation, compared with the previous simpler transitory and persistent inflation scenarios, is that it peaks several quarters after the initial quarter. Therefore, inflation expectations can meaningfully affect the timing of conflict decisions. In Appendix Figure C.8, we consider the case where workers' inflation expectations are based on observed inflation expectations in the survey data, by combining the Survey of Professional Forecasters (SPF) and the New York Federal Reserve's Survey of Consumer Expectations (SCE). In Appendix Figure C.9, we instead assume that workers have no foresight; they expect inflation to be at the steady state in the next period and are surprised by inflation in each period. No matter the assumptions on inflation expectations, the share of overall welfare costs of the 2021–23 inflation that is due to conflict remains above 50%.

6.3 Quantitative Robustness

We explore the robustness of our findings to different parameterizations and extensions of the model. The exact magnitudes of the costs of inflation to workers vary, but our main lesson—that a significant share of aggregate costs of inflation arises from conflict—is robust across a range of plausible calibrations.

Indexation parameter γ. The degree of inflation indexation of default wages is an important input to our calculations. If we allow the default wage to be more indexed, then the overall costs of inflation to workers fall. However, while the degree of indexation affects the overall costs of

[28] These results are not comparable to quantitative exercises from menu-cost models of price setting, which typically study the welfare costs of steady-state changes in inflation and use permanent decreases in consumption as welfare units (e.g., Nakamura et al., 2018). We instead study the welfare costs of transitory inflation shocks and use decreases in a single year of consumption as welfare units.

inflation, it does not affect the *relative* importance of conflict. Intuitively, the impact of inflation shocks on worker welfare is proportional to $1-\gamma$, i.e., all that matters for workers' decisions is the component of inflation that is not automatically accounted for through wage indexation, $\left(1-\gamma\right)\hat{\pi}_t$. The degree of indexation simply scales up both the overall costs of inflation shocks (see, e.g., (14)) and aggregate costs of inflation due to conflict, but does not affect the relative importance of conflict. We formalize this intuition:

Proposition 3. *To first order, the ratio of aggregate costs of inflation due to conflict to the overall costs of inflation shocks, $-\hat{\varkappa}/\hat{\mathscr{W}}$, is invariant to the degree of indexation of default wage $\gamma \in [0,1)$.*

Panel A of Appendix Figure B.8 quantitatively investigates how the indexation parameter affects the impact of the persistent inflation shock.[29] We vary the degree of indexation γ between 0 and 0.6. The upper bound is conservative: the indexation of actual wages to inflation estimated by Smets and Wouters (2007) is 0.58. The indexation of default wages to inflation shocks in the absence of conflict must be lower. Even with high indexation of 0.6, we still find meaningful costs of inflation to workers. Moreover, consistent with Proposition 3, we verify that the ratio of aggregate costs of inflation due to conflict to the overall costs of inflation remains constant—above 0.5—as the degree of indexation varies.

Probability of free wage catch-up λ. A second important parameter is λ, the probability that a worker receives a free wage catch-up opportunity. Our baseline calibration has $\lambda = 3.12\%$ using the share of workers who reported zero conflict costs in our survey, implying an 11.90% share of annual free catch-up. This strategy could understate the true value of λ. Workers who do not have zero conflict costs might still receive free wage catch-up if the firm offers workers unsolicited wage increases to avoid conflict. Panel B in Appendix Figure B.8 shows that our conclusions are similar with higher values of λ than in the baseline calibration.[30] As we increase λ and hence the share of annual free catch-up, $1-(1-\lambda)^4$, the share of aggregate costs of inflation arising from conflict becomes smaller. However, the ratio of aggregate costs of inflation due to conflict to the overall costs of inflation remains above 50% even if $\lambda = 12\%$, implying a 40% share of annual free catch-up (i.e., 4 times more than our baseline calibration). External estimates of

[29] Here, we discuss results for the persistent inflation shock from Panel B of Figure 9. Appendix Figures B.9 and B.10 also present the analogous results for the transitory shock and 2021-2023 inflation.

[30] For each λ, we re-calibrate κ so that conflict threshold $\mathbb{T} = 1.75\%$ is kept constant and fix all other parameters as in Table 2.

how wages increase beyond the default wage are well within this range.[31]

Conflict costs κ. Finally, we assess the quantitative robustness of our results to variations in the conflict cost κ, which map one-to-one with the conflict threshold $\mathbb{T}$ as explained in Section 5. In our baseline calibration, we calibrate $\kappa = 7.97\%$ so that the conflict threshold is $\mathbb{T} = 1.75\%$, following our survey evidence. Panel C in Appendix Figure B.8 varies the conflicts cost κ such that the conflict threshold $\mathbb{T}$ varies between 1% and 2%, the interquartile range of our estimates. We find that our quantitative results are robust to different parameterizations of conflict costs. Even with $\mathbb{T} = 1\%$, implying a significantly lower conflict cost $\kappa = 3.70\%$, the ratio of aggregate costs of inflation due to conflict to the overall costs of inflation remains above 50%.

We also consider an extension of our model that accommodates heterogeneous conflict costs, capturing the dispersion of elicited conflict thresholds in Figure 6. In Appendix Section D.2, we modify the baseline model by assuming that workers have heterogeneous conflict costs. We measure these conflict costs using the distribution of conflict thresholds in Figure 6. We show that the ratio of aggregate costs of inflation due to conflict to overall costs of inflation is again above 50% for all inflation scenarios.[32]

Alternative Calibration. Complementary to the above exercises studying robustness to variations in a given parameter, we also consider alternative calibrations. First, in Appendix Section C.7, we calibrate conflict costs and the probability of free wage catch-up (κ and λ) using only the 21% of respondents who took action in 2023, as these respondents may have a better understanding of the nature of conflict costs. Second, in Appendix Section C.8, we calibrate κ and λ using only the subset of respondents who took action in 2023 by having a difficult conversation with their employers. In both cases, the ratio of aggregate costs of inflation due to conflict to overall costs of inflation shocks remains close to or above 50% for all inflation scenarios, verifying the robustness of the conflict channel's importance.

General-equilibrium determination of inflation. In the main analysis, we study how inflation shocks impact worker welfare within a partial equilibrium model. In Appendix Section

[31] For instance, Faberman et al. (2022) estimate that 3.1% of all employed workers receive unsolicited job offers each month, which translates to 31% per year.

[32] This extended model also explains the untargeted positive relationship between the elicited conflict threshold and conflict-induced nominal wage growth documented in Footnote 21 and Appendix Section D.1: workers with higher conflict costs choose conflict less frequently, meaning that on the relatively rare occasions when they do, their wage growth is higher.

C.3, we extend our analysis by considering a general-equilibrium model in which inflation is determined endogenously. In this model, inflation can be driven by either positive aggregate demand shocks (monetary policy easing shocks) or negative aggregate supply shocks (productivity shocks). We show that the underlying source of inflation does not matter in evaluating the impact of inflation on worker welfare. The benefits from wage catch-up due to more frequent conflict in response to inflation are offset by the associated conflict costs. The ratio of aggregate costs of inflation due to conflict to overall costs of inflation remains high. However, aggregate shocks can impact worker welfare beyond their effect through inflation (e.g., through conflict-induced real wages, as in (15)). Demand-driven inflationary shocks are expansionary and can raise welfare beyond the shock's impact through inflation, while supply-driven inflationary shocks are recessionary and can reduce worker welfare beyond the shock's impact through inflation. In this sense, the source of inflation (demand- vs. supply-driven) does matter for overall worker welfare.

7 Conclusion

Why do workers dislike inflation so much? We show that "conflict costs" play a significant role: workers must incur these costs to have their nominal wages keep up with inflation, as employers do not automatically provide wage increases when inflation is high. We capture these conflict costs in a menu-cost style model applied to wage setting, and show, both analytically and quantitatively, that conflict costs change how inflation shocks impact workers' welfare. Disciplined by a survey of U.S. workers, our model demonstrates that incorporating conflict costs substantially increases the costs of inflation to workers.

Beyond the specific application to the costs of inflation, our conflict cost model offers a tractable approach to introducing state-dependent wage setting, providing many avenues for future research. For example, firms may also face costs in adjusting wages away from the default wage offer. These firm-side conflict costs are particularly relevant for downward wage rigidity, as firms would prefer to adjust wages downward when possible. In subsequent work, we aim to quantify these firm-side conflict costs, link them to empirical evidence on downward wage rigidity, and study their macroeconomic implications. We also hope that future work builds on our evidence linking conflict to wage growth, and continues to explore the importance of conflict in observational data.

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