

# Inflation Expectations, Wages and On-the-Job Search

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## Abstract

I design and implement a survey of U.S. workers to study the causal effect of inflation expectations on on-the-job search. Using hypothetical scenarios, I decompose and quantify effects at the individual level into direct effects that hold other expectations constant and indirect effects that arise from updated labor market expectations. On average, higher inflation expectations increase search intentions, but this effect is partially offset by higher expected unemployment, reflecting a “supply-side” view of inflation. Taken together, the results offer suggestive evidence for the muted wage growth observed in the post-COVID inflationary period.

JEL No. C83, D84, E24, E31, J60

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## 1 Introduction

The 2021-2022 inflationary episode saw the highest inflation rates in decades across many advanced economies. In countries such as the United States, the United Kingdom, and throughout the euro area, the surge in inflation occurred against a backdrop of tight labor markets. This situation raised concerns that workers, in attempting to catch up with unexpected price increases and to mitigate further expected real income losses, would exacerbate wage and price pressures. Workers' demands could materialize either through directly asking for pay raises or by increasing their job search efforts to find higher-paying positions. By end-2024, while inflation rates have cooled, real wages have not yet returned to pre-inflation levels.

How do inflation expectations affect employed workers' search behavior? In this paper, I design and implement a survey of workers employed in the United States. I first elicit workers' one-year ahead macroeconomic expectations, their plans to search for a higher-paid job in the near future, and their demographic and job-related characteristics. Then, I induce changes in their macroeconomic expectations by presenting hypothetical scenarios in which the Central Bank announces forecasts for inflation and unemployment rates. I focus on short-term inflation expectations, given their importance for price and wage setting (Weber et al., 2023) and their predominant role in the recent inflationary episode (Hajdini, 2023; Werning, 2022). In particular, I assess how each announcement translates into a change in expectations. Workers adjust their inflation expectations towards the information provided in the hypothetical Central Bank announcements, and adjust their planned behavior in line with these posterior expectations.

I separate the effects of higher inflation expectations on planned search behavior into direct and indirect effects. The direct effect represents the impact of higher inflation expectations when labor market expectations remain constant. In practice, however, changes in inflation expectations can spill over into unemployment expectations. The indirect effect, therefore, arises from updated labor market expectations in response to inflation expectations. In canonical random job search models, workers optimally choose their search effort by equating the marginal cost to the expected marginal benefit of search. This expected benefit includes the value from switching jobs, weighted by the probability of receiving an offer. When the labor market is slack, the probability of finding a job for a given search effort is lower, reducing incentives to search. Depending on how workers perceive the co-movements between inflation and unemployment, these spillovers could either offset or amplify the direct effects of inflation expectations.

My survey design accounts for these potential dynamics. Decomposing and quantifying changes in behavior into direct and indirect effects provides a more comprehensive understanding of the mechanisms through which inflation expectations influence behavior. On average, a 1 percentage point increase in inflation expectations raises intentions to search for a higher-paying job by 1.2 percentage points. However, workers tend to associate higher inflation with higher unemployment, which dampens average intentions to search. This "supply-side" view of inflation provides a potential reason for why real wages have not grown as much as initially anticipated at the onset of the inflationary surge.

Furthermore, the within-subject design enables me to go beyond average effects and to characterize the cross-sectional distribution of individual-level effects. First, it allows me to examine the distribution of the effects of Central Bank announcements on inflation and labor market expectations, providing direct evidence on heterogeneous effects of Central Bank communication on household expectations. Second, it captures the distribution of the effects of these expectations on behavior across heterogeneous workers. This distribution is relevant, as shifts in the composition of job seekers play a significant role in aggregate wage cyclical (Gertler et al., 2020; Grigsby et al., 2021; Bauer and Lochner, 2020; Black and Figueiredo, 2022).

To validate respondents' intentions to search, I re-contact survey participants three months after the initial survey to assess their actual behavior. Reported intentions to search effectively predict whether employed workers pursued a higher-paying job, confirming that *ex-ante* planned behavior aligns closely with *ex-post* realized behavior.

**Related literature** This paper contributes to a broad literature on the formation of macroeconomic expectations and its impact on household behavior (see Candia et al. (2020) or Fuster and Zafar (2022) for a review). In particular, this paper is most closely related to a nascent strand of the literature that leverages survey data to study the impact of inflation expectations on labor market expectations and actions. Several studies show that households associate higher expected inflation to expected losses in income (Hajdini et al., 2022; Stantcheva, 2024; Baek and Yaremko, 2024). These studies show how, given higher inflation expectations, workers choose whether to engage in costly wage bargaining (Guerreiro et al., 2024), adjust reservation wages (Baek and Yaremko, 2024) or intensify on-the-job search (Pilossoph and Ryngaert, 2024). Georgarakos et al. (2024) focus on the impact of inflation uncertainty, and find that reducing inflation uncertainty increases planned search intensity. These papers present complementary methodologies and datasets, offering a thorough understanding of worker behavior in an inflationary environment. This paper adds to this body of evidence by documenting the individual-level heterogeneity of behavioral responses of workers employed in a variety of occupations, industries and states, and by explicitly accounting for the role of unemployment expectations.

Secondly, this paper contributes to a growing literature on the links between business cycle dynamics and labor market transitions. Job-to-job transitions matter for reallocation, wage growth and productivity growth. Several papers explore the theoretical links between business cycle fluctuations and job ladder dynamics that take place through on-the-job search (Faccini and Melosi, 2023; Moscarini and Postel-Vinay, 2022; Trigari, 2009; Krause and Lubik, 2007). Empirically, there is contrasting evidence of countercyclical search among the employed (Bransch et al., 2024; Ahn and Shao, 2021; Elsby et al., 2015). Some studies highlight that different motives for searching on-the-job can generate offsetting cyclical properties, depending on whether employed workers search for a job to avoid unemployment or to climb the job ladder (Fujita, 2010; Simmons, 2023). Other studies use survey design to recover perceived returns or costs of on-the-job search (Adams-Prassl et al., 2023; Miano, 2023). I contribute to this literature by providing empirical evidence on on-the-job search given workers' different

perceived stages of the business cycle, accounting for both the effects of perceived labor market slack and inflation.

By measuring the spill-overs of inflation expectations to unemployment expectations and its effects on behavior, this work is related to a strand of literature that examines the joint formation of macroeconomic expectations through mental models of the macroeconomy and perceived sources of economic fluctuations. This literature draws on both cross-sectional and time series data on expectations ([Bhandari et al., 2019](#); [Hou, 2020](#); [Jain et al., 2022](#); [Ferreira and Pica, 2024](#)) as well as experimental methods ([Andre et al., 2022](#); [Binetti et al., 2024](#)).

Methodologically, measuring the causal effect of *one* macroeconomic expectation is challenging - macroeconomic variables, as well as their expectation counterparts, are correlated and likely to jointly impact behavior. Depending on the underlying economic shocks, the magnitude and sign of the correlation between macroeconomic variables may differ not only across individuals, but across time and within-individuals, limiting the use of observational data on choices and expectations. This simultaneity also poses challenges under experimental settings - [Fuster and Zafar \(2022\)](#) or [Coibion et al. \(2023\)](#) discuss how an “exclusion restriction” problem arises when an information treatment is used to instrument for changes in expectations and behavior is regressed on this instrument.

To address these challenges, I build on the literature on survey measurement of expectations (see [Manski \(2018\)](#); [Bachmann et al. \(2022\)](#) for a review). I elicit subjective choice probabilities under incomplete scenarios, following the stated preference literature ([Manski, 1999](#)) and estimate treatment effects based on conditional expectations as in [Giustinelli and Shapiro \(2024\)](#), [Wiswall and Zafar \(2021\)](#), [Ameriks et al. \(2020\)](#) or [Arcidiacono et al. \(2020\)](#). Hypothetical scenarios, beyond having a causal interpretation, allow for specification of environments that may not be observable in practice ([Armantier et al., 2022](#)). I specify scenarios where the Central Bank makes different announcements of economic forecasts with no policy commitment, akin to what is usually referred to as “Delphic” forward guidance ([Campbell et al., 2012](#)). The within-individual comparison of how expectations update in response to different types of Central Bank announcements contributes to the empirical literature studying how Central Banks can use communication to affect agents’ expectations ([Coibion et al., 2022, 2020](#); [Haldane and McMahon, 2018](#); [Binder, 2017](#)).

**Paper structure** The rest of the paper is structured as follows: Section 2 explains the analytical framework underlying the survey design and describes the empirical strategy. Section 3 presents the survey results. Section 4 presents the results from a follow-up survey that validates respondents’ planned actions. Section 5 and Section 6 showcase further robustness checks and discussion. Finally, Section 7 concludes.

## 2 Methodological framework

This section shows how I use survey elicitation to identify and decompose the causal effect of inflation expectations on workers' on-the-job search intentions into a direct channel and an indirect channel operating through unemployment expectations.

Measuring the behavioral effects of macroeconomic expectations poses an identification problem (Candia et al., 2020). Expectations about different macroeconomic variables are jointly formed and can jointly influence behavior. For example, inflation and unemployment co-move in equilibrium, as described by the Phillips curve, so a change in inflation expectations may induce revisions in unemployment expectations, making it difficult to separate the direct effect of inflation from the indirect effect operating through labor market beliefs.

This issue is particularly relevant for job search because unemployment expectations, by capturing expected labor market tightness, may have a first-order effect on search incentives. Experimental variation, such as information treatments, can isolate direct effects, but in this setting they may miss an economically meaningful channel through which inflation expectations influence on-the-job search behavior.

I address this identification issue using a within-subject design based on hypothetical scenarios that elicit subjective choice probabilities under counterfactual macroeconomic environments.<sup>1</sup> This approach resolves the identification problem for three reasons. First, the within-subject design controls for unobserved individual heterogeneity by comparing each worker to themselves across scenarios. Second, hypothetical scenarios allow the researcher to fix elements of the macroeconomic environment, which is infeasible with observational data and difficult to implement credibly in information experiments. Third, rather than eliminating indirect channels, the design explicitly measures them by eliciting search intentions under counterfactual combinations of inflation and unemployment expectations.

To formalize the identification problem and clarify the objects recovered by the survey, I adopt a potential outcomes framework. Let  $S_i(\pi^e, u^e)$  denote worker  $i$ 's subjective probability of searching for a higher-paid job, which depends on one-year-ahead inflation expectations  $\pi^e$  and unemployment expectations  $u^e$ .

A change in inflation expectations from  $\pi_0^e$  to  $\pi_1^e$  typically induces an endogenous revision in unemployment expectations,  $u_1^e = u_0^e(\pi_1^e)$ . The resulting total effect on search intentions is:

$$S_i(\pi_1^e, u_1^e(\pi_1^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)).$$

I define a direct effect, holding unemployment expectations fixed,

$$\Delta D_i \equiv S_i(\pi_1^e, u_0^e(\pi_0^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)),$$

and an indirect effect operating through unemployment expectations,

$$\Delta I_i \equiv S_i(\pi_0^e, u_1^e(\pi_1^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)).$$

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<sup>1</sup>Stated preference methods include conditional probability elicitation (Giustinelli and Shapiro, 2024), vignettes, or strategic surveys (Ameriks et al., 2020; Armantier et al., 2022). Hypothetical scenarios correspond to functions assigning environments to individuals in the population (Manski, 1999).

Formally, a first-order expansion of  $S_i(\pi, u)$  around baseline expectations  $(\pi_0^e, u_0^e)$  implies that the total effect can be written as:

$$S_i(\pi_1^e, u_1^e(\pi_1^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)) \approx \Delta D_i + \Delta I_i,$$

In general, these two effects are not separately identified from variation in realized expectations alone. Furthermore, as indicated by the subscript  $i$ , individuals can revise unemployment expectations heterogeneously. My survey design addresses these challenges.

**Survey flow** Table 1 describes the survey flow. I elicit workers' macroeconomic expectations, their subjective risk of losing their job, as well as the probability of searching for a higher-paid job given inflation and unemployment expectations.<sup>2</sup> Then, I recover under each hypothetical scenario the posterior expectations and search intentions conditional on posterior expectations. The last part of the survey elicits demographic and other control variables about respondents' economic and professional characteristics. I focus on one-year-ahead macroeconomic expectations and three-month-ahead planned behavior.<sup>3</sup>

Table 1: Elicited objects

<b>Priors</b>	
Inflation expectations	$\mathbb{E}_{it}(\pi_{t+12}) \equiv \pi_{i0}^e$
Unemployment expectations	$\mathbb{E}_{it}(u_{t+12}   \pi_{i0}^e) \equiv u_{i0}^e$
Job loss risk	$P_{it}(eu_{t+12} = 1   \pi_{i0}^e, u_{i0}^e)$
Current search intentions	$P_{it}(Y_{it+3} = 1   \pi_{i0}^e, u_{i0}^e) \equiv S_i$
<b>Expectations under hypothetical scenarios</b>	
Inflation expectations	$\pi_{i1}^e$
Unemployment expectations	$\mathbb{E}_{it}(u_{t+12}   \pi_{i1}^e) \equiv u_{i1}^e$
<b>Search intentions under hypothetical scenarios</b>	
Search under posterior inflation	$P_{it}(Y_{it+3} = 1   \pi_{i1}^e, u_{i0}^e) \equiv S_i^D$
Search under posterior unemployment	$P_{it}(Y_{it+3} = 1   \pi_{i0}^e, u_{i1}^e) \equiv S_i^I$
<b>Controls</b> (see Table 14 for full list)	
Sociodemographic	Age, gender, race, education, state of residence, home ownership
Job characteristics	Occupation, job tenure, part-time/full-time contract
Pay characteristics	Date and reason of last raise, labor union member, COLA clauses

**Identification** The hypothetical scenarios are designed to map directly into these counterfactual objects, allowing each component of the total effect to be point identified at the individual level. Identification relies on the assumption that, conditional on inflation and unemployment expectations, revisions in other macroeconomic expectations induced by the scenarios have

<sup>2</sup>The elicitation of search probabilities allows respondents to express uncertainty about factors that can affect their decision-making. For a discussion on choice probabilities see, for example, [Blass et al. \(2010\)](#).

<sup>3</sup>Empirical work by [Glick et al., 2022](#) shows that one-year-ahead inflation expectations affect wage inflation, whereas longer-term expectations do not. Consistent with this, [Armantier et al., 2022](#) find that long-term inflation expectations are largely unresponsive to persistent inflation shocks.

no first-order effect on on-the-job search. This assumption is supported by my data and by existing survey evidence: once inflation and unemployment expectations are controlled for, other macroeconomic expectations do not predict workers' search behavior.

Using the mapping

$$\frac{\partial S_i}{\partial \pi} \Big|_{(\pi_0^e, u_0^e)} (\pi_1^e - \pi_0^e) \approx S_i(\pi_1^e, u_0^e(\pi_0^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)),$$

$$\frac{\partial S_i}{\partial u} \Big|_{(\pi_0^e, u_0^e)} (u_1^e(\pi_1^e) - u_0^e(\pi_0^e)) \approx S_i(\pi_0^e, u_1^e(\pi_1^e)) - S_i(\pi_0^e, u_0^e(\pi_0^e)),$$

we can use the elicited objects to retrieve:

$$\frac{\partial S_i}{\partial \pi} \Big|_{(\pi_0^e, u_0^e)} \approx \frac{S_i^D - S_i}{\pi_{i1}^e - \pi_{i0}^e} = \beta_{i1} \quad \frac{\partial S_i}{\partial u} \Big|_{(\pi_0^e, u_0^e)} \approx \frac{S_i^I - S_i}{u_{i1}^e - u_{i0}^e} = \beta_{i2} \quad \frac{du^e}{d\pi} \Big|_{\pi_0^e} \approx \frac{u_{i1}^e - u_{i0}^e}{\pi_{i1}^e - \pi_{i0}^e} = \gamma_i$$

which corresponds to the total slope:

$$\frac{dS_i}{d\pi} \Big|_{(\pi_0^e, u_0^e)} = \frac{\partial S_i}{\partial \pi} \Big|_{(\pi_0^e, u_0^e)} + \frac{\partial S_i}{\partial u} \Big|_{(\pi_0^e, u_0^e)} \frac{du^e}{d\pi} \Big|_{\pi_0^e}.$$

The total individual treatment effect is, to a first order, the sum of the direct effect of inflation expectations and the indirect effect of unemployment expectations that changed in response to higher inflation expectations ( $\beta_{i1} + \gamma_i \beta_{i2}$ ). This treatment effect is subjective, in the sense that it is evaluated by the individual. It is also *ex-ante*, as it is evaluated prior to the treatment actually taking place.<sup>4</sup>

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<sup>4</sup>Some papers, such as Arcidiacono et al. (2020) and Giustinelli and Shapiro (2024) have used the term subjective ex-ante treatment effect. Others (for example Ameriks et al. (2020)) have referred to it simply as treatment effects.

**Hypothetical scenarios in detail** Three hypothetical scenarios describe a situation where the Central Bank discloses information about its one-year ahead expected price inflation and the national unemployment rate, respectively. This is akin to what is described in the Central Bank communication literature as Delphic forward guidance (Campbell et al., 2012), whereby the Central Bank announces their expected future economic conditions without making any binding promises on future policy. Individuals' baseline expectations are made conditional on a state of the world that *differs* from the one I describe in the scenarios. To isolate the variation of interest, each scenario pins down other macroeconomic variables. Table 2 maps the theoretical objects elicited in following each of the scenarios.

Table 2: Scenarios

Scenario	Environment specification	Elicited objects
Scenario 1.	Fed expects 7 percent inflation	$\tilde{u}_{i1}^e$
Scenario 2.	Fed expects 7 percent inflation, unemployment expectations unchanged ( $u_{i0}^e$ )	$\pi_{i1}^e, S_i^D$
Scenario 3.	Fed expects unemployment rate $\tilde{u}_{i1}^e$ , expected inflation unchanged ( $\pi_{i0}^e$ )	$u_{i1}^e, S_i^I$

After each scenario is described, I re-elicit respondents' expectations over the object described under that scenario. For example, in Scenario 1:

*How do you expect prices to evolve over the next 12 months following the Fed's announcement?  
By how much?*

By explicitly eliciting individuals' expectations under the hypothetical scenario, I make sure that the changes in behavior that I identify correspond to the changes in expectations that would happen in that scenario.<sup>5</sup> Each scenario block concludes with the re-elicitation of planned behavior:

*In this scenario, what is the percent chance that you search for a higher-paid job to replace your current job over the next 3 months?*

The exact phrasing of each of the scenarios is specified below.

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<sup>5</sup>As a robustness measure, I re-estimate these effects taking into account the scenarios and not the re-elicitations. Results do not change significantly.

### **Scenario 1. Higher expected inflation**

*Suppose that, after an unexpected shock, the Fed announces that it expects the inflation rate to be 7 percent 12 months from now. In your opinion, 12 months from now, what will be the national unemployment rate?*

### **Scenario 2. Higher expected inflation, *ceteris paribus***

*Suppose that, after an unexpected shock, the Fed announces that it expects the inflation rate to be 7 percent 12 months from now.*

*The job market will be just as you first thought. The expected national unemployment rate is [respondent's baseline expected unemployment] percent. It will be as easy to find or lose a job as it was before the shock.*

### **Scenario 3. Higher expected unemployment, *ceteris paribus***

*Suppose that, due to an unexpected shock, the Fed announces that it expects the national unemployment rate to be [respondent's expected unemployment rate when inflation rate is 7 percent] percent 12 months from now.*

*Predictions for the inflation rate are exactly in line with your first thoughts: Prices are expected to increase by [respondent's baseline inflation expectation] percent over the next 12 months.*

In sum, this approach yields individual-level, subjective ex-ante treatment effects allowing for rich heterogeneity in both beliefs and responses. These individual level effects can then be aggregated to recover an average effect.

### 3 Survey Results

#### 3.1 Sample composition

The survey was administered on-line on the 24<sup>th</sup>, 25<sup>th</sup> and 30<sup>th</sup> of August 2023. Participants were recruited in Prolific through convenience sampling. In total, 722 participants started the survey and 682 individual responses were collected, which makes for an attrition rate lower than 5%. The median completion time was 9 minutes. The survey sample spans across the United States, with responses from 46 states. It also broadly captures the U.S professional fabric, covering responses from workers employed in 18 out of 20 sectors included in the North American Industry Classification System (NACE), and in all 23 major occupational groups of the Standard Occupational Classification System (SOC). Table 1 compares the composition of the survey sample to that of the employed population in the Current Population Survey (CPS). The two are broadly aligned, with the former being more educated, less female and undersampling young individuals. A more detailed description of the sample, including occupation, area of residence, home ownership status is available in the [Data Appendix](#).

Table 3: Sample composition

	Survey	CPS
High-School Degree or Less	12,6	33,8
Some College Education	24,7	25,7
College Degree or More	62,7	40,5
Age 18-34	29	33,5
Age 35-49	42,5	32,1
Age 50-65	24	27,4
Over 65	4,4	6,9
Female	41,5	46,8
White	77,4	77
Part-time	15,8	16,7
Northeast	16,7	17,4
Midwest	23,2	21,3
South	27,6	37,5
West	32,4	23,8
Management, professional, related	60,4	42,9
Service occupations	10,3	16,2
Sales and office	19,5	19,2
Farming, fishing, and forestry	0,3	0,6
Construction, and maintenance	3,9	8,4
Production, transportation, and material moving	5,6	12,7

Average shares for Current Population Survey computed using 2022 monthly data on employed respondents only. Survey weights used.

### 3.2 Descriptive analysis

**Prior macroeconomic expectations** Figure 1 shows the distribution of one-year ahead expectations for inflation and unemployment rates, respectively.

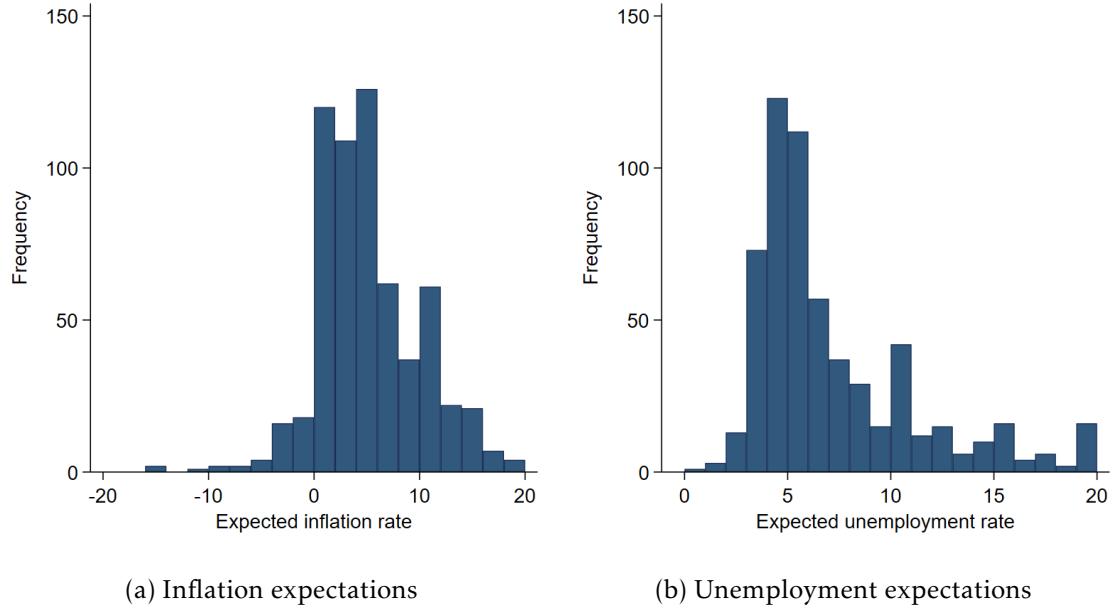


Figure 1: Distribution of prior macroeconomic expectations

Respondents' one-year ahead inflation expectations are highly correlated but lower than their inflation perceptions over the previous 12 months, as can be seen from Figure 2. On average, respondents believed prices to have increased by 7.6 percent over the last 12 months and expected prices to increase by 3.9 percent over the next 12 months. Figure 3 shows the cross-sectional joint distribution between inflation and unemployment expectations.

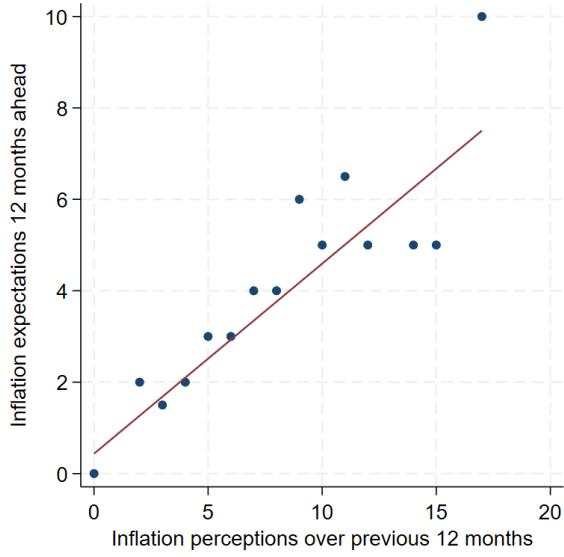


Figure 2: Inflation perceptions and expectations

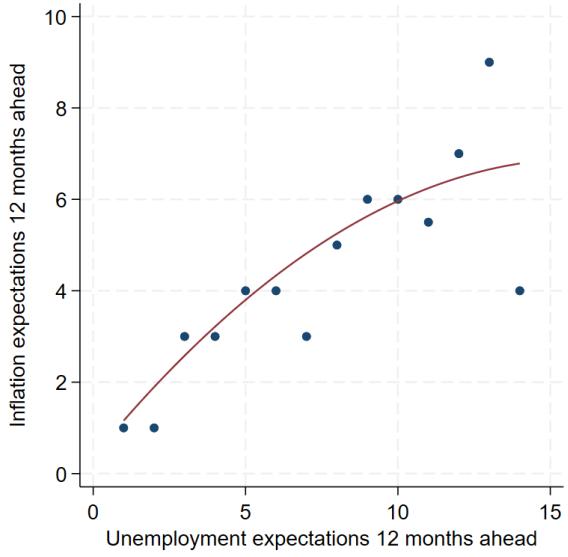


Figure 3: Unemployment and inflation expectations

**Prior intentions to search** Figure 4 shows the distribution of respondents' intentions to search on-the-job for a higher-paid job over the next 3 months. About a third of respondents report a zero percent chance of searching for a higher-paid job over the next 3 months. Around 23 percent of respondents have a 50 percent or higher chance of searching for a higher-paid job over the next 3 months. Figure 5 plots respondents' intentions to search for a higher-paid job against their inflation expectations. On-the-job search can be seen by respondents as either a tool to relocate to a better job, or as a way to avoid unemployment.<sup>6</sup> To gather whether these different motivations shape the relationship between search intentions and unemployment rate expectations, I divide workers into two quantiles based on the unemployment rate they report facing. I classify workers as facing below and above median unemployment risk, respectively. Figure 6 relates intentions to search on-the-job and unemployment rate expectations conditional on individuals' own unemployment risk. Two findings emerge: Firstly, individuals with above median unemployment risk are more likely to search for a higher-paid job while employed. Secondly, while search on-the-job increases with expected unemployment rates among workers facing high unemployment risk, the opposite relationship is present for workers in safer positions. Figure 7 shows how workers' self-reported reservation wages vary with intentions to search on-the-job. Workers who report higher percent chances to search on-the-job tend to have lower reservation wages, regardless of whether they face high or low unemployment risk.

<sup>6</sup>See, for instance, Adams-Prassl et al. (2023) on main motivations for on-the-job search

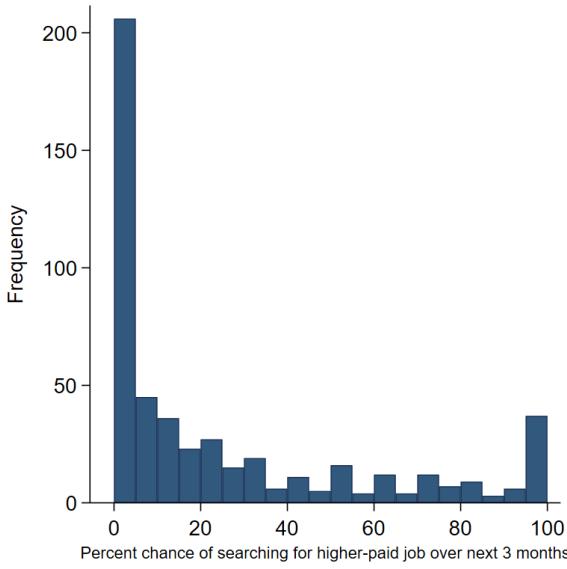


Figure 4: Percent chance to search on-the-job

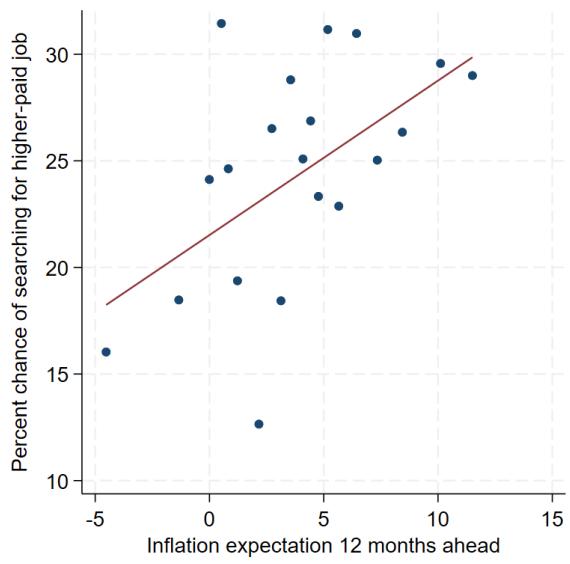


Figure 5: On-the-job search and inflation expectations

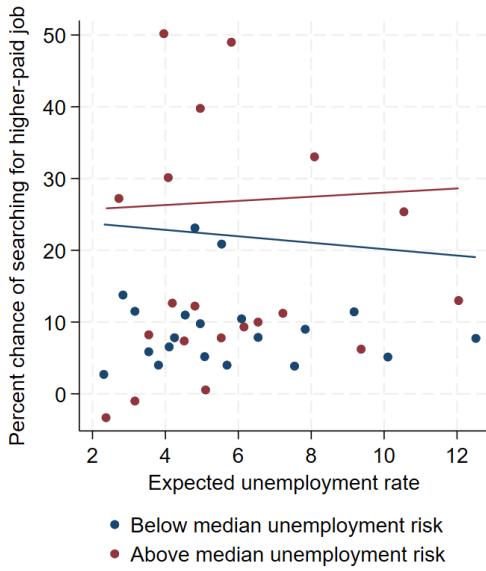


Figure 6: On-the-job search and expected unemployment

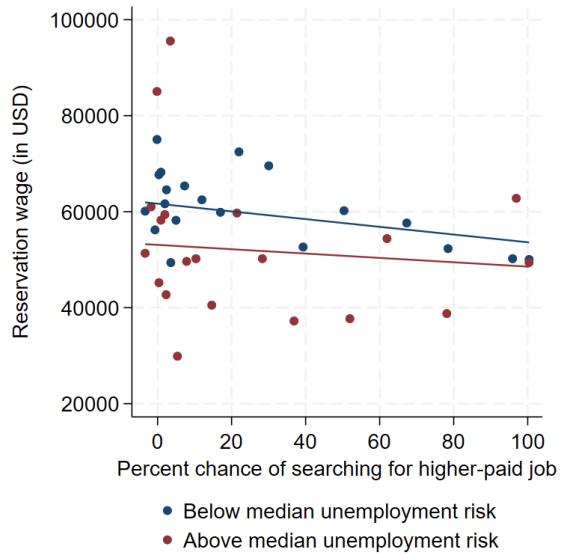


Figure 7: On-the-job search and reservation wages

**Effects of Central Bank communication** Figure 8 shows how respondents adjust their macroeconomic expectations under the direct and indirect scenarios, respectively. In particular, 8(a) plots respondents prior expected inflation rates against an orange line signaling the 7% inflation rate specified in the scenario, and their posterior inflation rates under that scenario. As can be seen, across all bins of prior expected inflation, respondents revise their expectations in the direction of the Central Bank announcement. Revisions in expectations are of larger magnitude among respondents with prior expectations much higher or lower than the ones specified in the scenario. Similarly, 8(b) plots revisions in expected unemployment under the

indirect scenario where the Central Bank announces an expected unemployment rate in line with 7% inflation, but no expected changes in prices. For each bin, the figure plots respondents' prior unemployment expectations, the unemployment rate that is specified in the scenario and the posterior expectation. Here too, respondents revise their expectations toward the Central Bank forecast.

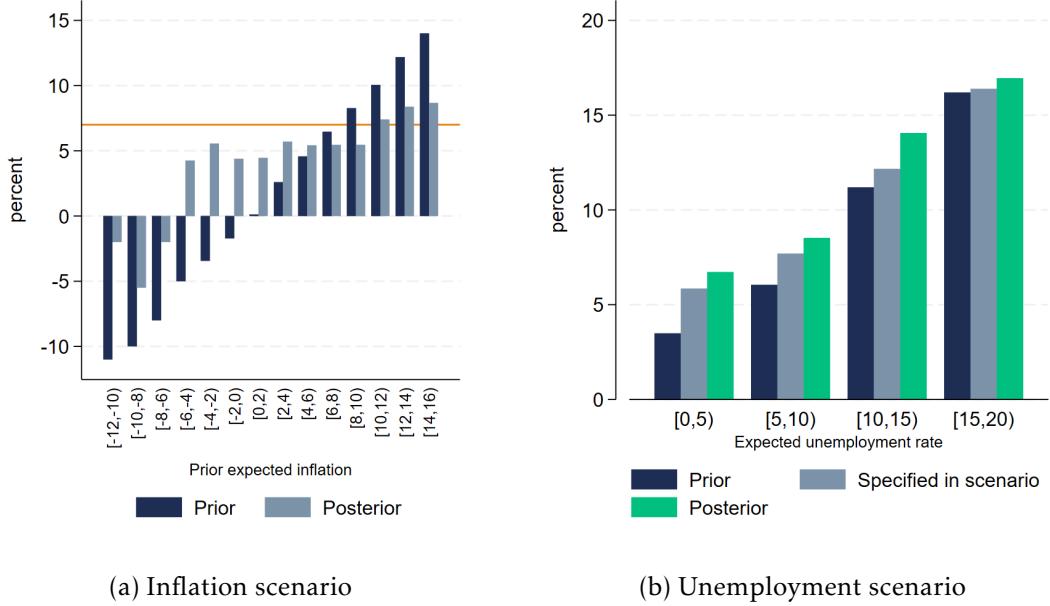


Figure 8: Mean revisions in expectations under inflation and unemployment scenarios

### 3.3 Average treatment effects

Table 15 shows average treatment effects (ATE). The average magnitude and statistical significance of the effects of inflation expectations on search behavior are muted when variation is not isolated from its spill-overs through labor market expectations.

Table 4: Average treatment effects

ATE: Inflation expectations			
	Direct ( $\beta_1$ )	Indirect ( $\beta_2\gamma$ )	Total ( $\beta_1 + \beta_2\gamma$ )
Search	1.014*** (0.294)	-0.250 (0.533)	0.764 (0.632)

### 3.4 Individual treatment effects

There is rich heterogeneity behind the average treatment effects that I identify. In the following subsections, I characterize the cross-sectional distribution of each individual treatment effects (ITE) of interest. These correspond to the direct and indirect effects. These effects are identified by comparing baseline and re-elicited behaviors under the Scenarios 2 and 3 described in Section ??.

Table 5 summarizes the distribution of individual treatment effects under the direct and indirect scenarios, as well as inflation expectations and planned search behavior before and after the scenarios were presented.

Table 5: Individual Treatment Effects - Search

<i>Direct scenario</i>					
	$\pi_0^e$	$\pi_1^e$	$p_0(\text{search})$	$p_1(\text{search})$	$\beta_{i1}$
Mean	4.46	5.88	25.24	28.94	0.76
SD	4.48	4.07	31.52	32.15	5.11
p10	0	0	0	0	-2
p25	1	4	0	1	0
p50	4	7	10	16	0
p75	7	8	40	50	1.67
p90	10	10	80	85	5

<i>Indirect scenario</i>					
	$u_0^e$	$u_1^e$	$p_0(\text{search})$	$p_1(\text{search})$	$\beta_{i2}\gamma_i$
Mean	8.98	11.18	25.24	26.99	-0.14
SD	9.61	10.38	31.52	30.11	9.29
p10	3	4	0	0	-3
p25	4	5	0	1	0
p50	5	8	10	15	0
p75	10	13	40	45	1
p90	19	22	80	76	4.4

Table 6 shows the share of negative, zero and positive individual treatment effects by scenario. Overall, the share of individuals revising their intentions to search upward is very similar in both scenarios.

Table 6: Share of search ITE, by sign

	Sign of ITE		
	Negative	Zero	Positive
Direct Scenario	0.19	0.43	0.39
Indirect Scenario	0.24	0.40	0.36

**Heterogeneity** On average, inflation expectations directly increase workers' plans to search for higher-paid jobs. However, the indirect effect of updated unemployment expectations mitigates these revisions. Behind these findings there is wide heterogeneity.

To study heterogeneity in the magnitude and the sign of the response to the scenarios, I run OLS and ordered probit regressions reported in Table 6. The first column studies how workers' baseline probability to search on-the-job varies with respondents' characteristics; The two following columns assess heterogeneity in the magnitude of responses to direct and indirect scenarios; The last two columns study the sign (negative, null or positive) of the response to direct and indirect scenarios.

Responses to the direct scenario - recall, that induces *ceteris paribus* variation in inflation expectations - are heterogeneous across gender and education. Responses to the indirect scenario, that focuses on the *labor market*, are heterogeneous for different levels of job tenure.

The regressions are estimated with respect to a baseline category with the following characteristics: white man aged between 30 and 40 years old, college-educated, working full-time in the same city that he lives in; who has had a pay raise over the past year; employed at his current job for more than 6 years; owns a home with an outstanding mortgage; with a pay contract without cost of living adjustments and not a member of a labor union; employed in a management occupation in the South region of the United States.

Direct effects of higher inflation expectations are lower for individuals between 50 and 59 years of age. Female and non-college educated workers are more likely to reduce the percent chance of search for a higher-paid job. Indirect effects through unemployment expectations are heterogeneous across job tenures. In particular, workers with lower job tenures would increase their intentions to search for a higher-paid job more than workers who have been in their job for longer than 6 years.<sup>7</sup>

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<sup>7</sup>Note that given the large mass of zero ITEs, coefficient estimates should be interpreted with caution. Relative differences with respect to the baseline category are the focal point of this heterogeneity analysis.

Table 7: Heterogeneity in ITE - on-the-job search

	Probability to search	ITE Size - OLS		ITE Sign - Oprobit	
		Direct ( $\beta_{i1}$ )	Indirect ( $\beta_{i2}\gamma_i$ )	Direct ( $\beta_{i1}$ )	Indirect ( $\beta_{i2}\gamma_i$ )
Under 30 years old	-3.84 (5.26)	0.19 (0.61)	-3.21** (1.56)	0.33 (0.21)	-0.03 (0.22)
Between 40 and 49 years old	-0.87 (3.97)	-0.33 (0.45)	-1.00 (1.24)	-0.10 (0.15)	0.12 (0.17)
Between 50 and 59 years	-4.13 (4.24)	-0.94** (0.48)	-0.13 (1.33)	-0.23 (0.16)	0.09 (0.18)
Over 60 years old	-9.96* (5.16)	-0.83 (0.58)	-1.04 (1.66)	-0.13 (0.20)	0.05 (0.23)
Female	0.96 (3.16)	-0.07 (0.36)	-1.06 (0.99)	-0.24** (0.12)	-0.14 (0.13)
No college degree	-3.99 (3.40)	-0.75* (0.39)	-1.13 (1.07)	-0.14 (0.13)	-0.10 (0.15)
Renter	8.24** (3.51)	-0.07 (0.40)	-1.11 (1.07)	-0.06 (0.13)	-0.14 (0.15)
Never had a pay raise	13.16** (5.94)	0.47 (0.67)	-2.09 (1.89)	-0.15 (0.23)	-0.19 (0.27)
Tenure lower than 1 year	4.03 (6.40)	0.33 (0.72)	4.32** (1.91)	0.19 (0.25)	0.47* (0.27)
Tenure between 1 and 2 years	14.54*** (5.32)	-0.64 (0.60)	4.28** (1.70)	-0.19 (0.20)	0.40* (0.24)
Tenure between 2 and 6 years	8.07** (3.54)	-0.71* (0.40)	2.37** (1.10)	-0.22 (0.13)	0.28* (0.15)
Constant	23.41*** (6.10)	2.31*** (0.69)	-0.79 (1.92)		
Other controls	Y	Y	Y	Y	Y
Observations	462	454	365	462	371

“Other controls” include dummies for race, home ownership status, commuter status, residence, liquidity constraints, part-time contracts, cost of living adjustment clauses, labor union membership, occupation and region.

## 4 Follow-up survey: contrasting planned and realized behavior

The causal effects estimated in the previous sections are evaluated *ex-ante* by respondents. These subjective causal effects are informative to the extent that planned behavior predicts actual behavior. To test whether that is the case, I re-contacted survey participants 3 months after the original survey was fielded. The data collection took place between 29<sup>th</sup> November and December 1<sup>st</sup>. Out of 682 respondents, 500 completed the follow-up study. The follow-up study was designed to contrast reported probabilities to search for a higher-paid job with actual self-reported behavior. In this sense, respondents are asked the following questions:

*Have you searched for a higher-paid job in the last 3 months?*

Additionally, I elicit labor market outcomes:

*Have you received a pay raise in the last 3 months?*

*Have you changed jobs in the last 3 months?*

When the survey was originally fielded, the average percent chance of search on-the-job over the next 3 months was 25 percent. Three months later, 38 percent of respondents who completed the follow-up survey reported to have searched for a higher-paid job. The average search intention among respondents who ended up searching for a higher-paid job was 46 percent, compared to 12 percent among workers who did not search.

Table 8 contrasts realized and planned behavior in more detail. Subjective search probabilities predict ex-post search behavior.<sup>8</sup> In both cases, there is a positive correlation between planned and realized behavior.

Table 8: Ex-post behavior and ex-ante beliefs

	Searched
P(search)	0.78*** (0.059)
Constant	0.50 (0.121)
Controls	Y
Observations	497
R-squared	0.301

<sup>8</sup>Note that uncertainty and the materialization of shocks may lead to divergences between *ex-ante* assessments and *ex-post* choices.

## 5 Validating direct effects of inflation expectations

### 5.1 A simpler scenario: The effects of housing inflation expectations

In this section, I focus on the particular role of shelter inflation expectations in affecting individuals' job search behavior. I elicit expectations of *local* rental prices.<sup>9</sup> While inflationary pressures have eased since the peak in June 2022 (9.1%), shelter inflation has been taking longer to cool off (Kmetz et al., 2023). On average, housing services account for one-third of the overall personal expenditures in the United States (Hazell et al., 2022). These facts illustrate how housing may be particularly salient to survey respondents, and how a scenario around that object may be realistic and easy to understand. Moreover, with regards to the simultaneity issue described in the introduction, a shock to local housing prices is more likely to affect agents' inflation expectations, without spilling-over to expectations about the labor market. In support of the former, Dhamija et al. (2023) find that households overweight house price expectations when thinking about their inflation expectations. With regards to the latter, Kuchler and Zafar (2019) document extrapolation from local home price changes to formation of national inflation expectations but zero effects on unemployment expectations.<sup>10</sup>

I elicit one-year ahead rent inflation expectations  $r_{i0}^e$  and  $r_{i1}^e$  based on the scenario transcribed below:

#### Higher expected rent inflation, *ceteris paribus*

Suppose the following:

The news report that average home rents in the city where you live are expected to increase by 9 percent over the next 12 months. This expected increase in rents is not caused by changes in jobs, wages or other prices.

Let  $S_i$  denote the same baseline search as previously defined and  $S_i^R$  define search under the direct scenario.

In this scenario, by what percentage do you think home rents in your area will increase over the next year?

On average, I find that a 1 pp increase in rent inflation expectations leads to a 0.294 pp increase in intentions to search for higher-paid jobs, and this effect is significant at a 95% confidence level.

<sup>9</sup>My focus on rent inflation expectations, instead of house price expectations, is in line with the BLS methodology to measure all shelter component of housing services.

<sup>10</sup>In my survey, the cross-correlations between inflation expectations, rent inflation expectations and unemployment expectations are of 0.43, 0.32 and 0.21, respectively.

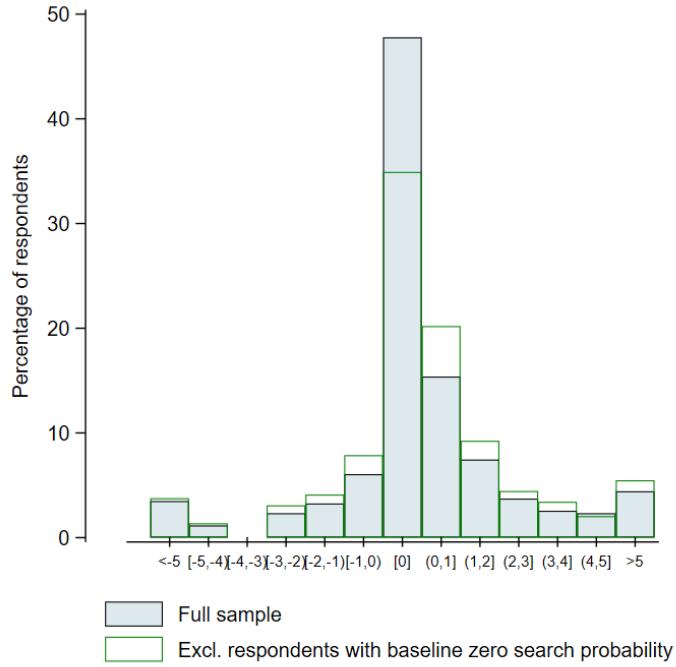


Figure 9: Distribution of ITEs to Rent Scenario

Table 9 shows how rent expectations change in response to a scenario where local news informs that rents are expected to increase 9% over the next year. As can be seen, rent expectations after the scenario become significantly less dispersed and concentrated around 9%. The 10<sup>th</sup> percentile increases from 0 to 6 percent and the 90<sup>th</sup> percentile decreases from 20 to 14% expected rent inflation. On average, the percent chance of searching for a higher-paid job increases from 23.7 to 26.11%, with median intentions increasing from 8.50 to 14%. On average, ITE are small and feature a significant mass around 0. As can be seen from Figure 9, this correspond to a large extent to respondents with baseline 0 percent chances of searching for a higher-paid job. On average, a 1 pp increase in rent inflation expectations leads to a 0.29 pp increase in intentions to search for a higher-paid job.

Table 9: Individual Treatment Effects - Rent scenario

	$r_0^e$	$r_1^e$	$p_0(\text{search})$	$p_1(\text{search})$	ITE
Mean	7.84	10.25	23.71	26.11	0.29
SD	7.82	5.11	31.51	31.23	3.46
p10	0	6	0	0	-1
p25	2	9	0	1	0
p50	5.5	9	8.5	14	0
p75	12	10	39	40	0.6
p90	20	14	76	81	2.79

Table 10 shows nearly 48% of respondents do not change intentions to search following the rent shock, 35% increase intentions to search and 16.8% decrease search intentions.

Table 10: Share ITE responses, by sign

	Sign of ITE		
	Negative	Zero	Positive
Search	0.17	0.48	0.35

**Heterogeneity** Table 11 shows heterogeneity of individual treatment effects along observable characteristics. The baseline category is defined as previously. The first column is, as before, a regression of baseline search behavior on observable characteristics.

Consistent with the general inflation scenario (Columns 3 and 5 of Table ??), ITEs are lower for female and non-college educated individuals. However, some new results emerge compared to the direct effects estimated before. We see that renters have higher baseline search intentions, but also higher ITEs to the rent scenario; Additionally, there are heterogeneous ITEs with respect to age, with lower estimated ITEs for all age categories compared to the baseline of 30 to 40 years old. Lastly, individuals who never had a pay raise have a higher estimated ITE compared to individuals who had a pay raise sometime over the past year.

Table 11: Heterogeneity in ITE - on-the-job search - rent scenario

	Search	ITE	
		Size OLS	Sign - Oprobit
Under 30 years old	-3.98 (5.22)	-1.16** (0.53)	-0.20 (0.20)
Between 40 and 50 years	1.60 (4.34)	-0.65 (0.44)	-0.50*** (0.17)
Between 50 and 60 years	-1.40 (4.92)	0.14 (0.50)	-0.41** (0.19)
Over 60 years old	-12.47** (5.69)	-0.65 (0.58)	-0.58*** (0.22)
Female	2.05 (3.46)	-0.66* (0.35)	-0.27** (0.13)
No college degree	-1.67 (3.62)	-0.52 (0.36)	-0.29** (0.14)
Renter	9.91*** (3.76)	0.75** (0.38)	0.17 (0.15)
Never had a pay raise	4.86 (6.72)	0.38 (0.70)	0.57** (0.26)
Tenure lower than 1 years	4.39 (7.12)	0.69 (0.72)	-0.07 (0.27)
Tenure between 1 and 2 years	19.69*** (5.92)	0.29 (0.60)	-0.06 (0.23)
Tenure between 2 and 6 years	13.25*** (3.85)	0.02 (0.39)	0.09 (0.15)
Constant	20.69*** (6.82)	-0.46 (0.69)	
Other controls	Y	Y	Y
Observations	388	380	388

## 6 Further robustness, extensions and discussion

### 6.1 Zero individual treatment effects

As highlighted in Section 3, a sizeable share of respondents does not change their planned behavior in the scenarios. To respondents who, for one of the scenarios, did not change their intentions to search, the survey asks why. Respondents can select all options that apply from the following: a) Scenario is not different enough b) Chances of *finding* a higher-paid job would not be affected by the scenario c) Doesn't know how to look for a higher-paid job d) Doesn't have time to look for a higher-paid job e) Satisfied with my current job or f) The scenario was difficult to understand. In providing this list of options, I account for three main reasons behind zero-effects:

1. Scenario complexity
2. Expected returns of search relatively low

### 3. Expected costs of search are relatively high

Table 18 shows, for each scenario, the share of zero individual treatment effects by individuals with baseline zero or hundred percent chances of searching for a job.

Table 12: Zero individual treatment effects, by scenario

	Scenario		
	Inflation	Unemployment	Rent
<i>Total Search ITE</i>	500	418	581
of which: Zeros	214	163	230
of which: $P(\text{Search}) = 0$	49.5%	55.2%	49.6%
of which: $P(\text{Search}) = 100$	15.0%	10.4%	14.3%

Across the scenarios, the most common answer was that the scenarios were not different enough to change respondents' planned behavior. The second most frequent answer was that respondents are satisfied with their current job. Third, same chances of finding a higher-paid job - while this is correlated with the first reason, it specifically ties with the expected returns from job search under the two scenarios, rather than potential income effects. Very few respondents mention that they do not know or cannot look for a higher-paid job, and only 3 respondents select difficulty in understanding scenarios as an option for zero changes in planned behavior.

Overall, this sub-section suggests that null ITEs may be more reflective of respondents' actual job constraints or non-pecuniary benefits, than of scenario complexity or confusion.

## 6.2 Consistency with other empirical evidence

Table 13: Comparison with other surveys' expectations

	Median one-year ahead inflation expectation (Aug 23)	Mean one-year ahead inflation expectation (Aug 23)	U.S. CPI YoY percent change (Aug 24, BLS)
Survey of Consumer Expectations (NYFed)	4.9%		2.5% (all items)
Michigan Survey of Consumers	3.5%	5.6%	3.2% (core)
This paper	4%	4.7%	

Table 13 compares the median and mean one-year ahead inflation expectations of my survey to those in long-running surveys established in the measurement of inflation expectations, the Survey of Consumer Expectations of the New York Fed and the Michigan Survey of Consumers. The last column of the table shows realized inflation one year later.

My elicitations correlate positively with similar measures in more extensive and widely accepted surveys. The longitudinal nature of these surveys can be used to understand how planned job seeking behavior correlates with realized job-to-job transitions. Figures 10 and 11 illustrate how realized inflation and job-to-job transitions correlate with self-reported survey measures of on-the-job search behavior - namely, those elicited in the Labor Market Survey, the in-depth quadrimestral module in the SCE focused on job search. Figure 10 shows that job-to-job transitions co-move positively with realized inflation. Figure 11 shows, especially since 2016, a co-movement between the self-reported percent chances of switching jobs and the actual job-to-job transitions.

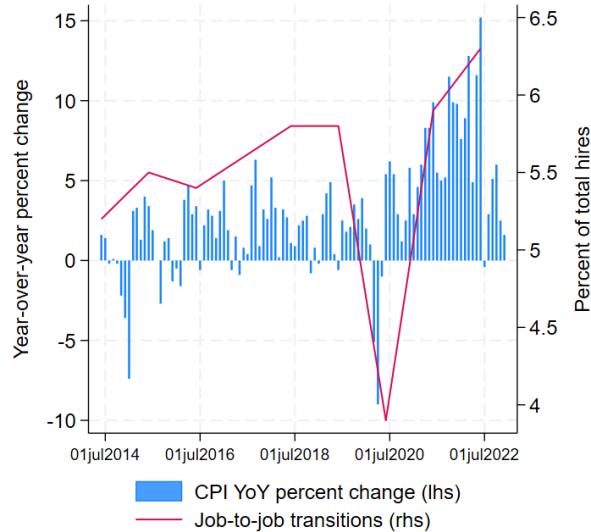
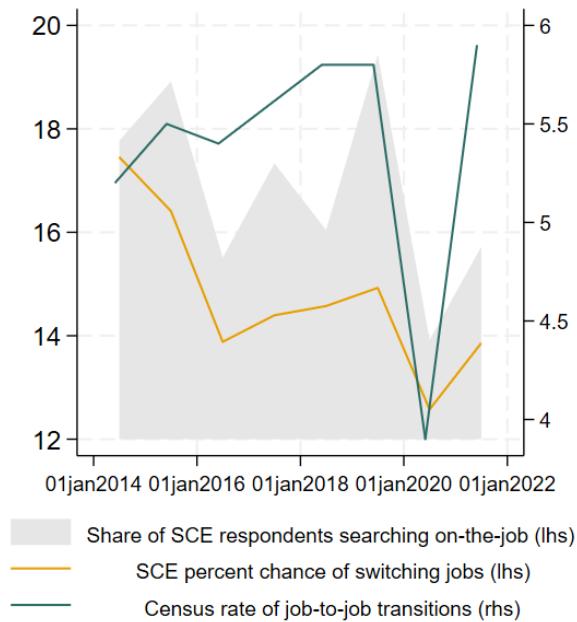


Figure 10: Inflation and job-to-job transitions - realizations

Source: Federal Reserve Bank of Cleveland (CPI YoY percent change) and US Census Bureau (Rate of job-to-job hires, non seasonally adjusted).

Figure 11: Survey measures of job search and realized job-to-job transitions



Source: Labor Market Survey, Federal Reserve Bank of New York (on-the-job search indicators and percent chance of working for a different employer in 4 months) and US Census Bureau (Rate of job-to-job hires, non seasonally adjusted).

Lastly, Figure 12 shows individual revisions in their unemployment expectations in response to higher inflation expectations. This corresponds to how I defined  $\gamma_i$  in Section 2. Around two thirds of respondents revise their unemployment expectations up in response to a 1 percentage point increase in inflation expectations. Most individuals (41% of respondents) revise their unemployment expectations upwards by at most 1 percentage point. For 6% of respondents the magnitude of revisions is between 1 and 2 percentage points, while 8% of respondents revise by more than 2 percentage points. Almost a fifth of respondents (19%) does not revise their unemployment expectations at all. On average, these findings are consistent with findings there is heterogeneity in belief updating even when provided with the same information about macroeconomic variables (Andre et al., 2022), and that on average individuals hold a recessionary view of inflation.

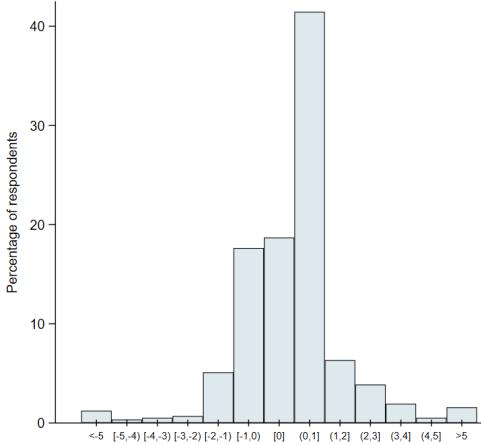


Figure 12: Changes in unemployment expectations (pp) given a 1 pp increase in inflation expectations

### 6.3 Extensions: other variables

The [Data Appendix](#) extends the analysis to workers' propensity to ask employers for a pay raise. Workers are more likely to search on-the-job than to ask for a nominal pay raise. Only a small share of workers would ask directly for a pay raise to their employer. This is compatible with workers facing some degree of nominal wage rigidity, documented in the literature. While the model I present in the next section assumes a specific form of wage rigidity (Calvo) that keeps the analysis tractable, I will comment on how inflation expectations change the wage bargaining outcome. The expected *frequency* of wage renegotiations, however, will be kept fixed by assumption.

### 6.4 Consistency with macroeconomic models

A recent literature has focused on effects of monetary policy on labor market flows, and how these flows can result in inflation pressures. To the extent that monetary policy affects households' expectations ([Binder et al., 2022](#)), these effects can be related to the ones of this paper. Most studies addressing the effect of monetary policy in frictional labor markets use modelling choices where transmission channels operate through labor demand. For example, when firms use wages to compete over workers, on-the-job search co-moves positively with inflation ([Moscarini and Postel-Vinay, 2022](#)). A monetary tightening increases propensity to search on-the-job and resulting job-to-job transitions ([Faccini and Melosi, 2023](#)). [Graves et al. \(2023\)](#) explicitly focuses on the role of labor supply in a partial setting with sticky wages, studying the participation margin. In this stylized model, a monetary contraction produces a substitution (reduces the job finding rate and hence, returns to search) and an income effect (increases the marginal utility of consumption) on workers' decision to participate in the labor market. [Cantore et al. \(2022\)](#) consider a two-agent model with hand-to-mouth and saver households, but no on-the-job search. An increase in interest rates increases debt repayments and generates an income effect in labor supply. In particular, it generates an increase in working hours at the bottom of the income distribution, though on average hours and labor earnings

decline. Unconstrained households reduce consumption because of intertemporal substitution, as well as higher returns to savings.

In ongoing work, I study the choice of optimal search intensity through the lens of a New Keynesian Dynamic Stochastic General Equilibrium (NK DSGE) model. The purpose of the model is to provide insight into how inflation expectations theoretically affect on-the-job search, mapping with the direct and indirect effects elicited in the survey. The model features search and matching frictions, as well as nominal price and wage rigidities. The model follows closely the works of [Gertler et al. \(2020\)](#) and [Gertler et al. \(2008\)](#). Workers search on-the-job to improve match quality, but do not directly negotiate their pay when joining a new job, joining the firms' existing payscale. Wages are negotiated in nominal terms and there are wage rigidities. Match surplus is decreasing with expected inflation across all match qualities.

## 6.5 Experimenter demand effects

Recent evidence that demand effects in online experiments is quantitatively small (see [Fuster and Zafar \(2023\)](#); [De Quidt et al. \(2018\)](#); [Clifford et al. \(2021\)](#), and in particular [Roth et al. \(2022\)](#) for evidence on macroeconomic information). I follow best practices to minimize concerns of experimenter demand effects (see, e.g. [De Quidt et al. \(2019\)](#); [Falk and Zimmermann \(2013\)](#)). In particular, the purpose of the survey and instructions are neutrally framed. Respondents are not primed in any direction of updating and are informed that their decisions are anonymous.

## 6.6 External validity and reverse causality

The elicitation of stated choices or behavior may prompt concerns regarding the unbiasedness or external validity of the estimated effects. Evidence (for example, [Fuster et al. \(2021\)](#); [Fuster and Zafar \(2022\)](#)) suggests that if scenarios are realistic and relevant for individuals, stated choices are meaningful and retrieve similar preference estimates to actual choices. With regards to inflation expectations in particular, [Coibion et al. \(2023\)](#) find that transitory shocks in inflation expectations lead to persistent effects on spending. The authors argue that a potential mechanism is revision of planned behavior that is followed through even after the shock has worn out.

A final issue for discussion is that, while I explore the link from inflation expectations to unemployment expectations, it could be argued that the inverse direction also affects behavior. I focus on the causal chain from inflation expectations to unemployment expectations to study responses to inflationary shocks. Additionally, there is empirical evidence that while news about inflation move both inflation and unemployment expectations, news about real economic variables do not generate this co-movement ([Hou, 2020](#)).

## 7 Conclusion

The recent inflationary period has revived interest in measuring the role of inflation expectations for nominal wage growth. Studies that take labor market frictions into account show how wage pressures can materialize, of which on-the-job search is an important mechanism. My survey sheds light on how increases in inflation expectations may have heterogeneous effects on individuals' search behavior. These behaviors are important as they could materialize into an effect on aggregate wages. Existing experimental studies contributing to measurement of this response do not take into account that individuals may hold heterogeneous views of what causes higher inflation - depending on how individuals observe or interpret shocks, some may expect unemployment and inflation to co-move positively, and others negatively. By doing that, my work allows for a more complete description, not only by identifying which individuals' responses to expected inflation are muted or exacerbated, but also why.

I find that inflationary pressures may per se increase search for higher-paid jobs. This effect, however, is counteracted by how average individuals think about the real economy in an inflationary environment. There is rich heterogeneity behind these average effects.

The findings of this paper raise interesting policy implications with respect to Central Bank communication and its use for expectations' management. In particular, this paper highlights how managing expectations of one macroeconomic variable may spill-over to how individuals view the broader economic reality.

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## A Data Appendix

### A.1 Detailed sample composition

Table 14: Detailed sample composition

	N	Percent
Under 30 years old	92	13.49
Between 30 and 39 years old	231	33.87
Between 40 and 49 years old	165	24.19
Between 50 and 59 years old	122	17.89
Over 60 years old	72	10.56
Male	399	58.50
White	528	77.42
College educated	428	62.76
Liquidity constrained	173	25.37
Rents	244	35.78
Owns with outstanding mortgage	248	36.36
Owns without outstanding mortgage	139	20.38
Works and lives in the same place	513	75.22
Last pay raise one year ago or less	422	61.88
Last pay raise more than 1 year ago	186	27.27
Never had a pay raise	74	10.85
Lives in a city	200	29.33
Lives in a town	69	10.12
Lives in a suburb	309	45.31
Lives in a rural area	104	15.25
Pay includes COLA	197	28.89
Labor union member	60	8.80
Part-time worker	108	15.84
Job tenure lower than 1 year	70	10.26
Job tenure between 1 and 2 years	69	10.12
Job tenure between 2 and 6 years	231	33.87
Job tenure higher than 6 years	312	45.75
Occupation		
Management	108	15.84
Business and Financial Operations	64	9.38
Computer, Math and Engineering	105	15.40
Science and Education	55	8.06
Arts, Design and Media	17	2.49
Healthcare	56	8.21
Sales and Related	50	7.33
Office and Administrative Support	75	11.00
Production	14	2.05
Transportation and Material Moving	22	3.23
Other	116	17.01

Northeast Region	126	18.48
Midwest Region	168	24.63
South Region	264	38.71
West Region	124	18.18
Observations	682	100

## A.2 Aggregating individual treatment effects

The previous sub-sections identify average treatment effects and unpack the underlying heterogeneity at the individual level. Each of the effects is based on two observations per individual, which effectively identify how behavior would change if expectations changed from one point to the other. This change, however, may not be the same for other points of the individual's inflation expectations distribution. To evaluate this, one could elicit behavior conditional on different inflation expectations, keeping unemployment constant. An alternative approach that minimizes the burden on respondents is to interpret these effects as *local*. Under minimal assumptions, I can aggregate responses to identify a curve between expectations and planned behavior. To illustrate, consider Figure 13, that plots survey responses for four hypothetical individuals (A, B, C and D). For each individual, the survey elicitation recovers a linear relationship between two points, corresponding to prior and posterior inflation expectations, respectively.

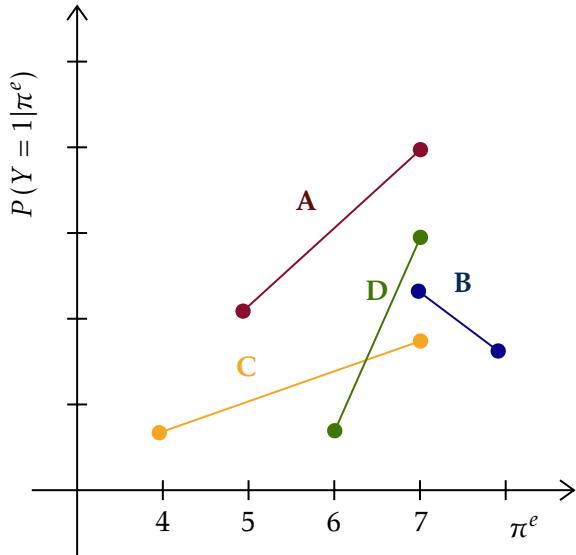


Figure 13: Illustration of hypothetical individual responses

The slope of each line is  $\beta_{i1}$ , the subjective direct effect of inflation expectations on behavior (job search or wage bargaining). A first assumption required is that this effect holds *locally*, this is, for every point of the inflation expectation distribution between the two elicited points<sup>11</sup>.

For each integer value of inflation expectations  $j$ , let  $\mathcal{J}$  be the set of respondents such that  $j \in [\pi_i^{min}, \pi_i^{max}]$  and  $j+1 \in [\pi_i^{min}, \pi_i^{max}]$ . Let  $N_j$  be the number of respondents in that set. Then, for each  $\pi^e \in [j, j+1]$ , we can estimate an average effect  $\beta_1(j)$ , with standard deviation  $\sigma(j)$ :

<sup>11</sup>Let  $\pi_0^e$  and  $\pi_1^e$  denote the prior and posterior inflation expectations,  $\pi^e \in [\min\{\pi_0^e, \pi_1^e\}, \max\{\pi_0^e, \pi_1^e\}] \equiv [\pi_i^{min}, \pi_i^{max}]$

$$\beta_1(j) = \frac{1}{N_j} \sum_{i \in \mathcal{J}} \beta_{i1}, \quad \sigma(j) = \sqrt{\frac{1}{N_j - 1} \sum_{i \in \mathcal{J}} (\beta_{i1} - \beta_1(j))^2}$$

As an example, in Figure 13, this aggregation method would imply using individual's C response to identify the effect between  $\pi^e = [4, 5)$ ; individuals A and C for  $\pi^e = [5, 6)$ ; individuals A, C and D for  $\pi^e = [6, 7)$ ; and individual B for  $\pi^e = [7, 8)$ .

Figure 14 plots the aggregate relationship between planned behavior and inflation expectations, *ceteris paribus*. In each plot, I estimate  $\beta_1(j)$  and plot 95% confidence bands. In line with previous findings, there is a positive relationship between inflation expectations and both intentions to search.

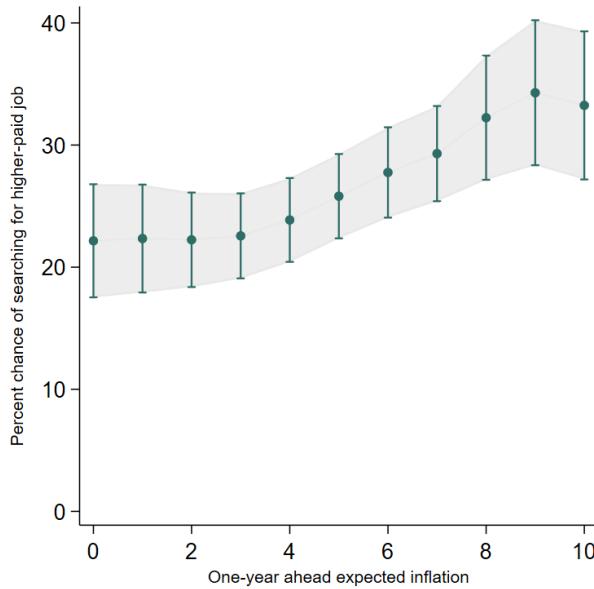


Figure 14: Average treatment effects

### A.3 Inflation expectations and wage bargaining

The elicitation is done to the same individuals on the same date and session, and follows the same flow as described in the main text. The elicited objects are:

- Probability of asking current employer for a raise given inflation and unemployment expectations  $P_{it}(Y_{it+3} = 1 | \pi_{i0}^e, u_{i0}^e) \equiv W_i$
- Probability to ask for a pay raise conditional on higher expected inflation, keeping expected unemployment constant:  $P_{it}(Y_{it+3} = 1 | \pi_{i1}^e, u_{i0}^e) \equiv W_i^D$
- Probability to ask for a pay raise conditional on unemployment expectations  $u_1^e$ :  
 $P_{it}(Y_{it+3} = 1 | \pi_{i0}^e, u_{i1}^e) \equiv W_i^I$

The elicitation question is:

*What is the percent chance that you will ask your employer for a pay increase over the next 3 months?*

Table 15: Average treatment effects

	ATE: Inflation expectations		
	Direct ( $\beta_1$ )	Indirect ( $\beta_2\gamma$ )	Total ( $\beta_1 + \beta_2\gamma$ )
Wage bargaining	1.259*** (0.399)	0.139 (0.552)	1.399* (0.711)

Table 16 presents similar summary statistics for the reported percent chances of asking for a pay raise following the direct and indirect scenarios. As in the previous sub-section, a scenario where the Fed reports an expected 7% inflation rate shifts the median respondents' expectations under that scenario towards that value. In terms of wage setting behavior, the median percent chance of asking for a pay raise increases from 5 to 8%. The 90<sup>th</sup> percentile also increases from 55 to 58%. On average, the percent chance of asking for a pay raise increases from 17 to 18.4%. The ITE is small on average, with significant heterogeneity.

The indirect scenario shows the effects of a change in unemployment expectations equivalent to that caused by a 1 percentage point increase in inflation expectations. An equivalent change in unemployment expectations generates a small increase on average intentions to ask for a pay raise, from 17.04 to 17.29%. While the median intention increases from 5 to 8 percent, the right-tail of the distribution decreases from 55 to 50%. The extremes of the distribution of ITE are of slightly larger magnitudes than under the inflation expectations scenario.

Table 16: Individual Treatment Effects - wage bargaining

<i>Direct scenario</i>					
	$\pi_0^e$	$\pi_1^e$	$W_i$	$W_i^D$	$\beta_{i1}$
Mean	4.46	5.88	17.04	18.41	0.96
SD	4.48	4.07	25.68	25.58	7.26
p10	0	0	0	0	-3.12
p25	1	4	0	0	0
p50	4	7	5	8	0
p75	7	8	25	25	1.97
p90	10	10	55	58	6.67

<i>Indirect scenario</i>					
	$u_0^e$	$u_1^e$	$W_i$	$W_i^I$	$\beta_{i2}\gamma_i$
Mean	8.98	11.18	17.04	17.29	0.10
SD	9.61	10.38	25.68	23.58	9.93
p10	3	4	0	0	-3.71
p25	4	5	0	0	-0.14
p50	5	8	5	8	0
p75	10	13	25	25	0.83
p90	19	22	55	50	5

Table 17 shows that in response to a scenario where the Fed announces 7% inflation, 48% of respondents increase intentions to ask for a higher-paid job to their current employer (9 pp higher than search behavior). A scenario focusing instead on unemployment rates increases wage bargaining intention of 37% of respondents, with a larger share of null or negative treatment effects.

Table 17: Share of wage bargaining ITE, by sign

	Sign of ITE		
	Negative	Zero	Positive
Direct Scenario	0.20	0.31	0.48
Indirect Scenario	0.26	0.38	0.36

Participants also reported in the follow-up study actual wage bargaining behavior which can be contrasted to elicited behavior.

*Have you asked your employer for a pay raise in the last 3 months?*

The average 18.5 percent chance of asking employers for a pay raise, which aligns well with the fact that 17 percent of respondents reported having asked for a pay raise 3 months later. Figure 15 contrasts realized and planned behavior in more detail.

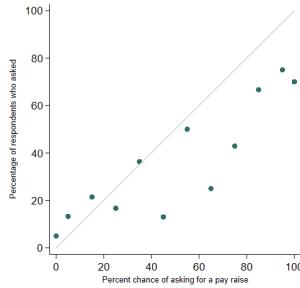


Figure 15: Wage bargaining: planned and realized behavior

Table 18: Zero individual treatment effects, by scenario

Scenario		
	Inflation	Unemployment
<i>Wage bargaining behavior:</i>		
Zeros	187	157
of which: $P(\text{Raise}) = 0$	80.7%	75.8%
of which: $P(\text{Raise}) = 100$	2.7%	2.5%

I elicit the main reasons for not asking for a pay raise for individuals with baseline zero percent chances of doing so. The most frequently mentioned reason by survey respondents is that their employer will not accept giving a pay raise (selected by 38% of respondents). A fifth of respondents mention their pay already automatically adjusts for changes in cost of living as the main reason for not asking for a pay raise. For 16% respondents, overall economic conditions are not favourable to asking; Finally, 17% respondents had already recently asked for a pay raise.

Table 19: Reasons for not asking for a pay raise

	Share	N
My employer will not accept it	38%	93
My pay automatically adjusts to changes in the cost of living	20%	49
I already asked for a pay increase recently	17%	41
The economy	16%	39
My pay is negotiated in collective bargaining	10%	23
Current work contract ending soon	2%	5
My partner recently had a pay increase	1%	2

## A.4 Additional tables and figures

### Rent scenario - individual treatment effects

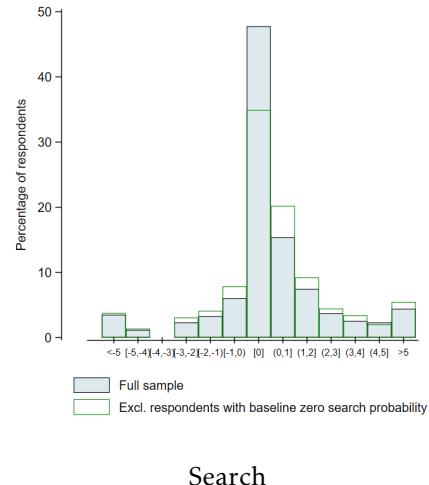


Figure 16: Individual effects of higher rent expectations on search

### Joint unemployment and inflation expectations

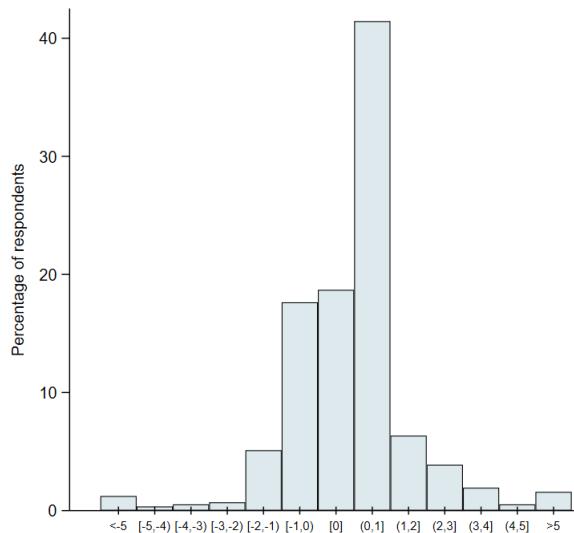


Figure 17: Individual percentage point changes in unemployment expectations in response to a 1 pp increase in inflation expectations

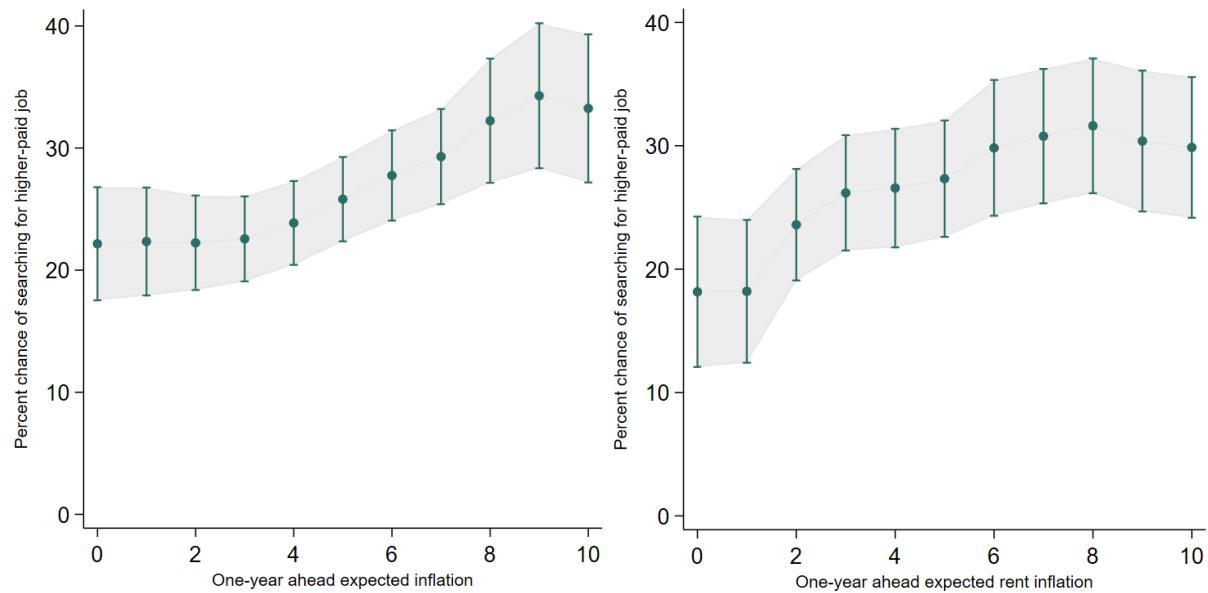


Figure 18: Search behavior and inflation expectations - general and rent inflation