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Working Paper

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Bank of Canada Staff Working Paper, No. 2022-34

Provided in Cooperation with:
Bank of Canada, Ottawa

Suggested Citation: Jain, Monica; Kostyshyna, Olena; Zhang, Xu (2022) : How do people view price and wage inflation?, Bank of Canada Staff Working Paper, No. 2022-34, Bank of Canada, Ottawa,
https://doi.org/10.34989/swp-2022-34

This Version is available at:
https://hdl.handle.net/10419/272978

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Staff Working Paper/Document de travail du personnel—2022-34

Last updated: July 22, 2022

How Do People View Price and Wage Inflation?

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DOI: https://doi.org/10.34989/swp-2022-34 | **ISSN** 1701-9397

Acknowledgements

We are grateful to Yuriy Gorodnichenko, Antonio Diez de los Rios, Oleksiy Kryvtsov, Chris Roth, Olivier Armantier, Emi Nakamura, Michael Weber, Rupal Kamdar, seminar participants at the Bank of Canada and conference participants at the Inflation Conference at the International Center for Economic Analysis, the Canadian Economic Association 2022 meetings and the Society of Nonlinear Dynamics and Econometrics 2022 meetings for helpful comments. We also thank Gregory Chung, Clara Kyung and Melissa Siqueira for excellent research assistance. The views expressed herein are those of the authors and not necessarily those of the Bank of Canada.

Abstract

This paper examines novel household-level data from the Canadian Survey of Consumer Expectations (CSCE) from 2014Q4 to 2022Q1 to understand households' expectations about price and wage inflation, their respective links to views about labour market conditions and their subsequent impact on households' outlook for real spending growth. We find, consistent with recent research, that households associate higher expected price inflation with worse labour market conditions. In contrast, higher expected wage growth is linked to better labour market outcomes—an avenue not previously explored—and consistent with standard macroeconomic models. These differing supply-side and demand-side views of price inflation and wage inflation are reflected in households' spending outlook: expected real spending is negatively linked to inflation expectations but positively linked to expected wage inflation. Finally, the link between households' inflation expectations and wage growth expectations is weak, suggesting limited pass-through from consumers' inflation expectations into their expected wage gains, and thus a lower likelihood of entering a wage-price spiral.

Topics: Inflation and Prices; Monetary Policy Communications
JEL codes: E21, E24, E31, C83, D84

1 Introduction

Inflation expectations play a key role in the evolution of economic activity and monetary policy. In particular, understanding households' expectations is imperative given the sheer volume of macroeconomic activity they conduct. The aim of this paper is to understand households' expectations of price and wage inflation, their respective links to the labour market, and their subsequent impact on households' outlook for real spending growth.

In his original work, Phillips [1958] first drew attention to the inverse relationship between wage inflation and unemployment, though the Phillips curve relationship has typically been estimated as a relationship between price inflation (rather than wage inflation) and some measure of economic activity. Likewise, the micro-founded New Keynesian Phillips curve remains agnostic about the differences between prices and wages. But do people really think of price inflation and wage inflation the same way? Our findings suggest that they do not. Specifically, using micro-level household data, we find that: i) households associate higher expected price inflation with worse labour market conditions; ii) households view higher expected wage inflation as being associated with stronger labour market conditions; iii) as a result, we see households' expected real spending growth is negatively linked to their inflation expectations and positively linked to their wage growth expectations; iv) inflation expectations are quantitatively weakly linked to wage growth expectations – a finding that remains unchanged over time in our sample and when wage indexation is accounted for, suggesting entering a wage-price spiral is less likely and v) these findings remain robust when we control for the effect of the COVID-19 pandemic.

To the best of our knowledge, this is the first paper to examine both price and wage inflation expectations. Our finding that households associate higher expected wage inflation with improving labour market outcomes is significant for a number of reasons. First, it highlights that for households, expected increases in the prices of the goods they buy is a very different concept from expected increases in the wages they earn. While the former is more traditionally used in research and policy analysis, the latter is what appears to be more consistent with standard macroeconomic models. Second, it is possible that households simply have a negative association with the word "inflation," which is often synonymous with price inflation. Wage inflation, on the other hand, is often referred to as wage growth, which depicts a more positive tone, highlighting the possibility of households' sensitivity to differences in the language used to acquire their views. Third, the differences in households' views between inflation expectations and wage growth expectations has implications for both macroeconomic models that treat them similarly, as well as for the communication strategies of central banks aiming to stimulate demand via inflation expectations, which may not have the desired effect.

One possible explanation for the difference in how people view the link between price and wage inflation and the labour market is that people might have a partial equilibrium view of the economy, not a general equilibrium view, as studied in Angeletos and Sastry [2021] and Bastianello and Fontanier [2021]. Households may understand their wage growth and their labour market situation, but they may not understand the general equilibrium effects. Hence, consumers may not realize that strong wage growth is linked to a strong labour market leading to higher output and inflation.

The link between consumer spending expectations and inflation expectations has also been examined in past research. Coibion et al. [2022] find that positive revisions in inflation expectations are associated with higher actual total spending, though this link is short-lived and could arise through several possible channels, including a positive link from intertemporal substitution and a negative link from the expected reduction

in real wages. In our paper, we control for some of these channels. Other papers have estimated the link between consumers' spending expectations or intentions to purchase goods and inflation expectations. For example, Crump et al. [2015] find a positive link between expected spending growth and inflation expectations, using the New York FRB Survey of Consumer Expectations. Drager and Nghiem [2020] and Drager et al. [2016] also find a positive link between spending intentions and inflation expectations. In contrast to these studies, using an information experiment from Dutch households Coibion et al. [forthcoming] find that higher inflation expectations are linked with lower purchases of durables, consistent with our finding of a negative link between spending and inflation expectations. Similarly, Binder and Brunet [2022] find that expected spending on cars is negatively linked to expected inflation, although more generally, higher inflation expectations are linked with shifting to earlier consumption of durables. Our findings also point towards some heterogeneity in the link between spending actions and inflation expectations: for some consumers, postponing major purchases is linked with higher expected inflation, while for others, making major purchases earlier is positively associated with higher expected inflation.

In addition to our key findings, our analysis also emphasizes the importance of some aspects that have thus far been less explored in examining the expectation formation of households. First, we find that the use of official unemployment rate statistics – at the provincial or census metropolitan area level – provide minimal insight into households' inflation expectations and their wage growth expectations. However, there is a robust link between a household's expectations of inflation and wage gains and their own labour market conditions, such as how likely they believe they will lose their job or find a new job, as well as their own views about future aggregate unemployment. This finding bears similarity to Andrade et al. [2022] who find that firms' expectations for aggregate variables are affected by industry-specific shocks not affecting the aggregate economy. Second, we find that the incorporation of inflation perceptions into our analysis, which measures what households believe inflation was in the past, is a key determinant of their views on what inflation will be in the future. Figure 1 shows that perceptions are indeed linked to household inflation expectations. The inclusion of inflation perceptions in our estimation significantly improves its explanatory power. This finding is consistent with Jonung [1981] and D'Acunto et al. [2020] who document a strong correlation between inflation perceptions and inflation expectations in Sweden and in the U.S., respectively.

The rest of the paper is organized as follows: Section 2 discusses the Canadian data sources used in our analysis, focusing primarily on introducing the Canadian Survey of Consumer Expectations (CSCE). Section 3 describes the main household-level model specifications used in this paper. Section 4 presents and interprets the estimation results. Section 5 concludes.

2 Data description

In this paper our main data source is the CSCE. We also use data from Statistics Canada for official measures of the Consumer Price Index (CPI) and the unemployment rate. This section will describe these sources.

2.1 Canadian Survey of Consumer Expectations

The Canadian Survey of Consumer Expectations (CSCE) is a nationally representative, quarterly, online survey of Canadians introduced in 2014Q4 to fill the gap in Canadian data on consumer expectations [Gos-

selin and Khan, 2015]. It surveys 2,000 respondents every quarter, with an equal number of respondents rotating in and out of the sample each quarter (for details about this survey see CSCE [2021]).[1] Canadians answer questions about their views about inflation, their labour market situation, spending, income, access to credit and demographic variables. This survey is implemented by a large polling firm on behalf of the Bank of Canada. We use data for the period 2014Q4–2022Q1.

The structure of the CSCE is similar to that of the Survey of Consumer Expectations (SCE) conducted by the New York Federal Reserve Bank [Armantier et al., 2017]. Both the CSCE and the SCE are somewhat different from another popular source of data on consumer expectations – the Michigan Survey of Consumers. The CSCE data has several advantages. First, it has some additional variables such as consumers' perceptions about past inflation that allow us to link them with consumers' expectations. Second, the CSCE, like the SCE, elicits expectations about spending growth rates, whereas the Michigan Survey of Consumers poses question as to whether this is a good or bad time to make a major purchase (e.g., a house or a car). Third, the CSCE and SCE elicit inflation expectations by asking about inflation rates, whereas the Michigan Survey of Consumers, for example, only asks whether prices will go up, down, or stay the same, and by what percent. Bruin de Bruin et al. [2008] showed that asking about inflation rates elicits inflation expectations more accurately, while questions about the price level tend to generate responses that are more likely based on respondents' own experience with prices.

The CSCE provides data on various socio-economic characteristics of respondents. In our analysis, we control for characteristics such as age, gender, income level, province, and relationship status. We use three age groups: young (ages 18–30), prime age (31–55), and seniors (55 and over). Respondents are categorized into three income levels: lower (40k or less), middle (40k to 100k), and higher (100k and above). Definitions of the variables used on our regression analysis and survey questions are included in Appendix A.

In our analysis, following Ehrmann et al. [2018] and common practice, we discard observations if: i) the respondent perceives/expects inflation to be less than −5 percent or more than +30 percent in the past/next 12 months; ii) the respondent expects inflation to be less than −5 percent or more than +30 percent in the next 12 to 24 months; iii) the respondent expects wage inflation to be less than −50 percent or more than +100 percent; or iv) the respondent expects their spending/income will be less than −50 percent or more than +100 percent. This rule affects 18 percent of the observations in the sample.

2.2 Consumer price index, wage growth and unemployment rate

We use data on the Consumer Price Index (CPI) from Statistics Canada from Cansim Table 18-10-0004-01 (formerly CANSIM 326-0020). We compute the inflation rate as a year-over-year growth rate in CPI All-Item for Canada (vector number v41690973) and for all provinces and territories. We also compute gasoline inflation. In the CSCE, we group respondents from British Columbia (BC), Northwest Territories (NWT), Yukon (YU) and Nunavut (NU) together. Respondents from the Atlantic provinces are also grouped together. We construct the inflation rate for BC+NWT+YU+NU and for the Atlantic provinces by weighting their individual inflation rates by their population (Table: 14-10-0292-01 (formerly CANSIM 282-0100)).

Figure 1 presents quarterly data on Canadian CPI inflation and consumers' expectations for future

[1] The sample size was 1,000 prior to 2018Q2.

inflation and perceptions about past inflation. Consumers' perceived and expected inflation rates are consistently above actual inflation. The positive bias in consumers' expectations has been discussed in the literature (Ehrmann et al. [2018], Schembri [2020] and many others).

There are several sources of data on workers' earnings and their growth in Canada. In this paper, we use wage growth from the Labour Force Survey (LFS), the Survey of Employment, and Payroll and Hours (SEPH) as direct measures of year-over-year growth of hourly earnings of employees. Figure 2 illustrates that expectations for wage growth by workers are relatively stable over the period 2014Q4–2022Q1 compared with actual growth from the LFS and SEPH.

The unemployment rate is based on the LFS, an official source of the measure of the unemployment rate in Canada. We use Cansim Table 14-10-0287-01 (formerly CANSIM 282-0087) for the unemployment rate for Canada (vector number v2062815) and for provinces. To construct the unemployment rates for the Atlantic provinces and BC+NWT+YU+NU, we use data from Table 14-10-0287-01 (formerly CANSIM 282-0087) and Table 14-10-0292-01 (formerly CANSIM 282-0100). Figure 3 presents the unemployment rate in Canada by province. We also use the unemployment rate in census metropolitan areas (CMA) from Table 14-10-0380-02. The unemployment rate at the CMA level represents the labour market situation at a more disaggregated level and may be more relevant to those living in these areas.

Figure 3 shows that the Canadian unemployment rate reached a peak of 13.1 percent in 2020Q2 after the COVID-19 outbreak had started and returned to its pre-pandemic level in 2022Q1.

2.3 Summary statistics

Table 1 presents summary statistics of key variables used in our analysis by the main socio-economic characteristics of the survey respondents – age, gender, labour force status, income category, whether in a relationship and whether they have children or not. This table reports the interpolated median: this statistic is a reliable measure of the central tendency in the consumer survey data as it weighs the mass of responses close to the median from above and below (Armantier et al. [2017]).

Table 1 illustrates that women, the unemployed, and respondents with lower household income have higher inflation expectations and perceptions. Similar observations about inflation expectations have been documented by Bryan and Venkantu [2001], Bruin de Bruin et al. [2010], Madeira and Zafar [2015] and others. The young and those with a higher household income level tend to report somewhat higher past wage growth and higher expectations for future wage growth. The youngest respondents and those with the lowest income tend to report a higher probability of losing their current job (about 9.8 percent) than other cohorts as these groups are more likely to be employed in a lower-wage and more precarious employment situation. Older respondents report a much lower probability of finding a job if they were to lose their current job (about 19.4 percent) compared with an average of about 50 percent for younger cohorts. Younger respondents report higher expectations for spending growth than older respondents, whereas there is little difference by gender and income level.

3 Household-level expectations: model specifications

Next, we take a closer look at how individual consumers think about inflation and the labour market. Do they form expectations in a way consistent with the Phillips curve relationship observed at the aggregate level? The household-level analysis in this paper was inspired by a Phillips curve relationship – a relationship between inflation and labour market slack – though our ultimate aim is to better understand household views of inflation, their link to the situation in the labour market as well as the impact of these views on consumers' expected spending. We address the following questions: Do consumers view inflation as negatively linked to labour market slack as expected from the traditional interpretation of the Phillips curve? Or do consumers think of inflation as "bad" as was shown in Candia et al. [2020] and Kamdar [2018]? Do people think about price inflation and wage growth differently? How do inflation expectations feed into expectations of wage growth? This question is especially relevant in the current environment of high inflation being experienced in Canada and in many other countries around the world. And finally, what is the link between expectations of inflation and spending? Are higher inflation expectations associated with lower spending as was hypothesised in Candia et al. [2020] and as was shown in Coibion et al. [2020] regarding spending on durables?

First, we estimate the following regression to understand the relationship between inflation expectations and the state of the labour market, controlling for other key factors:

$$\mathrm{E}_t\pi_{i,t+12} = c^{\pi} + \alpha^{\pi}\mathrm{E}_t\pi_{i,t-12} + \beta^{\pi}\text{Labor Market Indicator}_{i,t} + \gamma^{\pi}\mathrm{E}_t w_{i,t+12} + \mathrm{X}_{i,t} + \epsilon^{\pi}_{i,t} \tag{1}$$

where $\mathrm{E}_t\pi_{i,t+12}$ is individual i's survey response for the expectation of the inflation rate over the next 12 months. $\mathrm{E}_t\pi_{i,t-12}$ is individual i's survey response for the perception of the inflation rate over the past 12 months. Labor Market Indicator$_{i,t}$ is the variable describing i's existing or expected labour market situation. $\mathrm{E}_t w_{i,t+12}$ is individual i's survey response for the expectation about the wage growth rate over the next 12 months. $\mathrm{X}_{i,t}$ are control variables including the individual's socio-economic characteristics such as gender, age, income group, relationship status, whether they have children or not, province fixed effects[2] and time fixed effects. c^{π} is a constant, and $\epsilon^{\pi}_{i,t}$ is an error term.

Second, we estimate the following regression to understand the relationship between wage growth expectations and the state of the labour market controlling for other key factors. We also include inflation expectations $\mathrm{E}_t\pi_{i,t+12}$ to assess whether inflation expectations are linked to wage growth expectations and how strongly:

$$\mathrm{E}_t w_{i,t+12} = c^{w} + \alpha^{w}\mathrm{E}_t w_{i,t-12} + \beta^{w}\text{Labor Market Indicator}_{i,t} + \gamma^{w}\mathrm{E}_t\pi_{i,t+12} + \mathrm{X}_{i,t} + \epsilon^{w}_{i,t} \tag{2}$$

where $\mathrm{E}_t w_{i,t+12}$ is individual i's survey response for the expectation about the wage growth rate over the next 12 months. $\mathrm{E}_t w_{i,t-12}$ is individual i's reported wage growth over the past 12 months. c^{w} is a constant, $\mathrm{X}_{i,t}$ are control variables as described before and $\epsilon^{w}_{i,t}$ is an error term.

Third, we assess the link between expected real spending growth and expectations about inflation and wage growth:

$$\mathrm{E}_t\text{RSpending}_{i,t+12} = c^{s} + \alpha^{s}\mathrm{E}_t z_{i,t+12} + \beta^{s}\text{Labor Market Indicator}_{i,t} + \gamma^{s}\mathrm{E}_t\text{Rincome}_{i,t+12} + \mathrm{X}_{i,t} + \epsilon^{s}_{i,t} \tag{3}$$

[2]All the results in the paper are robust if we use the 18 regions defined by the first character of the postal code. This definition would split the Quebec province into Eastern Quebec, Metropolitan Montréal, and Western Quebec; Ontario into Eastern Ontario, Central Ontario, Metropolitan Toronto, Southwestern Ontario and Northern Ontario.

where $\text{RSpending}_{i,t+12}$ is the expected real spending growth calculated as the difference between individual i's survey response about expected nominal spending growth and the expectation of the inflation rate over the next 12 months. $\text{E}_t\text{Rincome}_{i,t+12}$ is individual i's expectation of real income growth in the next 12 months calculated as the difference between expected growth of nominal income over the next 12 months and expected inflation over the next 12 months. $\text{E}_t z_{i,t+12}$ represents either $\text{E}_t \pi_{i,t+12}$ or $\text{E}_t w_{i,t+12}$, which are estimated separately. $\text{X}_{i,t}$ are control variables as described before.

In the above regressions, to assess the link between expectations of inflation, wage growth and spending growth to the state of the labour market, we use several measures describing the state of the labour market, $\text{Labor Market Indicator}_{i,t}$. These measures include both aggregate and individual indicators, official statistics from Statistics Canada as well as respondents' own views of the labour market. More specifically, we use:

- The official unemployment rate from Statistics Canada at the provincial level, UR_t^{prov}, and the unemployment rate in census metropolitan areas.
- Consumers' views about the evolution of the unemployment rate in Canada. These are based on the survey responses about the probability that the Canadian unemployment rate is going to be higher/lower in the next 12 months ($\text{Prob. UR higher}_{i,t}$/ $\text{Prob. UR lower}_{i,t}$). CSCE respondents are randomly assigned to one of two groups: group 1 answers a question about the probability that the unemployment rate in Canada will be higher in 12 months, and group 2 answers a question about the probability that the unemployment rate in Canada is going to be lower in 12 months. We run regressions separately for each of these groups.
- Respondents' own employment status *unemployed*, which is a dummy variable. Unemployed = 1 if unemployed, unemployed = 0 if employed.
- Workers' outlook about their job prospects. These are based on the expected probability of losing their current job (Prob. losing job) or the expected probability of finding a job if they were to lose their current job (Prob. finding job).

These measures of the state of the labour market encompass dynamics at the aggregate level (provincial unemployment rate), respondents' own views about the evolution of the Canadian aggregate unemployment rate, individual employment status and expected labour market outcomes. Using a variety of indicators at different levels of aggregation would allow us to assess their relative importance to consumers' views of inflation as well as the robustness of our findings.

Lastly, we perform further analysis of spending intentions of households using the following question that elicited their spending and savings intentions in light of their inflation expectations two years ahead: "Which, if any, of the following actions are you taking, or planning to take, in light of your expectations of [inflation/deflation] over the 12-month period between [t+12 and t+24]?" Respondents can choose all options that apply to them from the following: bring forward major purchases (furniture, appliances), postpone major purchases, cut back spending and save more, shop around more for better value in goods and services, push for increased pay with current employer, look to increase income in other ways (change jobs, take on second job, work more hours with current employer) or take no action. We create a dummy variable $1_{i,t}^{Action}$ for each of these options equal to 1 if a respondent has chosen this option and equal to 0 if the respondent has not chosen this option. Then, we conduct a regression analysis similar to spending

equation (3) with the created dummy variable as a dependent variable using a Probit model.

$$E_{it}1_{i,t+12,t+24} = c + \alpha \mathrm{E}_t\pi_{i,t+24} + \gamma \mathrm{E}_t\mathrm{Rincome}_{i,t+12} + \mathrm{X}_{i,t} + \epsilon_{i,t} \tag{4}$$

where $E_{it}1_{i,t+12,t+24}$ is a dummy variable for each of the actions described above, and $\mathrm{E}_t\pi_{i,t+24}$ are the inflation expectations for inflation two years ahead (to be consistent with the time horizon of inflation expectations in the survey question). We also perform a robustness check by using perceptions of past inflation, $\mathrm{E}_t\pi_{i,t-12}$.

4 Household-level expectations: results

Our estimation results are presented in three sections. The first section focuses on the link between inflation expectations and various indicators of labour market activity. The second section looks at the relationship between wage growth expectations and the same activity measures. The third section looks at the relationship between spending growth expectations and inflation expectations.

4.1 Inflation expectations

4.1.1 Inflation expectations and labour market conditions

Table 2 presents the results of the regressions with household inflation expectations. We performed an estimation with different indicators for labour market conditions and with different sub-samples of the respondents based on the availability of the labour indicators. First, we present estimations with the aggregate unemployment rate at the provincial level and respondents' expectations about the Canadian unemployment rate, in Table 2 Panels A–F. Panels A, B and C present the results of estimations with the full sample of respondents including people in the labour force (employed and unemployed) and out of the labour force. Panels D, E and F show results using observations of respondents in the labour force. Panels G and H show results of estimations with the probabilities of losing a job and finding a job, which are available for employed respondents only. And Panel I presents the results of estimations with a dummy variable for unemployed/employed status, i.e., these estimations are for those who are in the labour force. Panels D, E, F and I have a comparable sample – those in the labour force.[3]

Our estimation results point to several interesting observations. First, we do not find a significant link between consumers' inflation expectations and the official unemployment rate, UR_t^{prov} (Panel A, Table 2). In other words, people's views of inflation do not appear to be associated with the aggregate unemployment statistics.[4] Households' inflation expectations are not linked to provincial inflation either, a result which is robust across estimations with all labour market indicators. These findings remain robust whether we use the full sample or only those in the labour force. A lack of links between inflation expectations and aggregate unemployment and aggregate inflation may be because of information frictions or rational inattention resulting in people not knowing the aggregate statistics or not considering such statistics as relevant to them

[3]The results presented in this table are robust to various modifications of the specifications presented here. Additional results are available upon request.

[4]We also considered smaller geographical regions by replacing the aggregate unemployment rate at the provincial level with the unemployment rate in census metropolitan areas (CMA). We still do not find a significant link between inflation expectations and the unemployment rates at the CMA level.

when forming their inflation expectations.

Second, despite the lack of the link to the aggregate unemployment rate, we find a statistically significant relationship between inflation expectations and consumers' own expectations about the future Canadian unemployment rate. Panels B and E show estimation results with the probability that the Canadian unemployment rate will be higher in the next 12 months, and Panels C and F show estimation results with the probability that the Canadian unemployment rate will be lower in the next 12 months. These estimations indicate a statistically significant link between inflation expectations and expectations about dynamics in the Canadian unemployment rate, in contrast to the lack of a relationship between inflation expectations and official aggregate unemployment statistics. The surprising finding is that households associate higher inflation expectations with a higher likelihood of increased unemployment, and they associate lower inflation with a higher probability that the unemployment rate will be lower. In other words, consumers view inflation as bad for the Canadian economy and for the Canadian unemployment rate. These findings are robust to the sample used: the full sample or only those in the labour force. Finally, we do not find systematic differences in the link between inflation expectations and labour market indicators across different regions in Canada.[5]

Third, our estimations with probabilities of losing a job or finding a job as well as respondents' own employment status yield consistent results: higher inflation expectations are associated with worse individual labour market outcomes. Higher inflation expectations are linked to a higher probability of respondents losing their current job (Panel H, Table 2) and to being unemployed (Panel I, Table 2). Higher inflation expectations are also linked to a lower probability of finding a job if a respondent were to lose their current job (Panel G, Table 2), though this relationship is not statistically significant.

The findings we have just discussed can be summarized as follows:

- First, individual inflation expectations are not linked to the statistics describing the aggregate state of the labour market (such as the provincial unemployment rate), but they are linked to consumers' own expectations about the future aggregate (Canadian) unemployment rate or individuals' expectations about their labour market situation (chances of losing their job or finding a new one) as well as their current employment situation (being employed/unemployed). In other words, individuals' own labour market outlook or experience shape their views of aggregate inflation. This is similar to the results in Andrade et al. [2022] about firms' expectations.

- Second, consumers view inflation as "bad": higher inflation expectations are associated with a worse labour market situation. In other words, consumers appear to have a supply-side view of inflation. Similar evidence about viewing inflation as "bad" has been documented by Candia et al. [2020] among consumers across several countries, Kamdar [2018] among consumers in the US, Coibion et al. [2020] among Italian firms.

These results from the regression analysis are consistent with the evidence of a supply-side interpretation of inflation, based on a direct question from CSCE. Large shares of respondents reported supply-side views of inflation, as shown in Figure 4: 35 percent of respondents expecting higher inflation in the future than in the past explained that this was because the economy would be in a worse shape, and 57 percent of respondents expecting weaker inflation in the future than they perceived it was in the past explained this view by a stronger economy. We also conduct exercises including interaction terms. The results don't reveal any systematic differences across different demographic groups or different regions.

[5]Results by regions are available upon request.

4.1.2 Inflation expectations: link to perceptions and expected wage growth

In all specifications that we have discussed above, the inclusion of household perceptions about past inflation significantly improves the explanatory power of the regressions and does not affect the coefficients linking inflation expectations to the indicators of the labour market (Table 2). This suggests that household inflation perceptions are a key determinant of household inflation expectations. In other words, there is persistence in consumers' views of inflation: perceptions of past inflation feed into expectations about future inflation. This finding is consistent with Jonung [1981], D'Acunto et al. [2020] and others who document a strong correlation between inflation perceptions and inflation expectations in Sweden and the U.S.

We also find that inflation expectations are positively linked to expectations about respondents' wage growth, and this link is statistically significant in all specifications of Table 2, except for Panels B and E. However, the relationship between inflation and wage expectations is quantitatively very weak, about 0.01–0.02, i.e., an increase in wage growth expectation of 1 percentage point (p.p.) leads to an increase of 0.01–0.02 p.p. in inflation expectations. This result can be interpreted as a limited link between respondents' wage gains and their expectations for inflation.

4.2 Wage growth expectations

4.2.1 Wage growth expectations and views about job conditions

Now we turn to discussing our results about the link between wage growth expectations and labour market conditions. Table 3 presents regression results with wage inflation expectations. Panel A shows results with the provincial unemployment rate, Panel B, with the probability that the Canadian unemployment rate will be higher in the next 12 months, Panel C, with the probability that the Canadian unemployment rate will be lower in the next 12 months, Panel D, with the probability of finding a job if respondents were to lose their current job, and Panel E, with the probability of losing their current job.[6]

Analysis of the results in Table 3 point to several key observations. First, as in the case of regressions with inflation expectations, there is little indication of a statistically significant link between wage growth expectations and the official provincial unemployment rate (Panel A, Table 3).

Second, we find a statistically significant link with expectations about the future Canadian unemployment rate, but the sign is the opposite of what we found in the regressions with inflation expectations. Canadians associate stronger wage growth with stronger labour market conditions. Panel B of Table 3 shows that a higher expected wage growth is linked with a lower likelihood that the Canadian unemployment rate will be higher, and Panel C of Table 3 shows that higher wage growth is associated with a higher probability that the Canadian unemployment rate will be lower. The sign of the relationship between expected wage growth and the labour market indicator suggests a demand-side interpretation of wage inflation, or in other words, wage inflation is viewed as "good" for the labour market.

Third, we find a similar relationship between expected wage growth and individuals' expectations about their own job prospects. People associate higher wage inflation expectations with a higher probability of finding a job if they were to lose their current job (Panel D, Table 3) and with a lower probability of losing

[6]The results presented in this table are robust to various modifications of the specifications presented here. Additional results are available upon request.

their current job (Panel E, Table 3). People who are less likely to lose their job report higher expected wage growth, and people who are more confident about finding a job if they were to lose their current job are more optimistic about their future wage gains. Thus, respondents' better job prospects are associated with stronger wage growth, which is consistent with a demand-side view of wage inflation.

To summarize, similar to our findings about inflation expectations, respondents' expectations about wage growth are not linked to statistics describing aggregate labour market conditions (provincial unemployment rate). Instead, they are linked to respondents' own views of the Canadian labour market or respondents' views about their own job stability (probability of losing a job) and prospects (probability of job finding). But higher wage growth is associated with stronger indicators of the labour market, whereas higher inflation expectations are linked to a weaker labour market.

Households view wage growth expectations differently than they do inflation expectations. Could the term "inflation" simply have a negative connotation for households? Could it be that wage growth expectations are closer to their own experience than inflation and therefore the two, though closely linked by economists, are viewed as different concepts by households? These questions warrant further research not only from the standpoint of better understanding how households form their expectations but also from the point of view of central bank communications.

4.2.2 Wage expectations: link to past wage growth and expected inflation

As in the case of inflation expectations, the inclusion of past wage growth is statistically significant in explaining wage growth expectations (Table 3) and improves the explanatory power of the regression, although the improvement is much smaller than in the case of inflation expectations. While wage growth expectations are positively linked to past wage growth, this link is quantitatively weaker (about 0.2) than in the case of the link between inflation expectations and inflation perceptions (about 0.8). This suggests lower persistence in expectations about wage growth than in inflation expectations.

Finally, the link between inflation expectations and wage growth expectations is statistically significant but quantitatively small with a coefficient of 0.1–0.2 on inflation expectations (column (5) in Table 3).[7] This indicates that inflation expectations do not feed strongly into the outlook for wage growth. The expectations about job losing or job finding and households' own views about the future Canadian unemployment rate are much more important determinants of wage growth expectations than workers' inflation expectations. This evidence suggests that workers do not expect their wages to keep up with their expected inflation. Coibion et al. [2021] also find a weak link between expected wages and inflation in their survey of firms of France. The evidence of this weak link in our paper as well as in Coibion et al. [2021] is consistent with what Canadian firms have reported regarding their wage setting in the Wage Setting Survey [Amirault et al., 2013]. Most of the firms adjust the pay of their workers to actual inflation over the past year, and only a small fraction take into account expectations for inflation over the next year. These practices may be informing workers' views and result in the weak link between expected inflation and expected wages. The weak link between inflation expectations and wage growth expectations also indicates that inflation expectations are not likely to feed into the wage-price spiral. However, our estimations were done using data for the period 2014Q4–2022Q1, and this link may be different in the environment of persistently high inflation, as was the case in the 1970s

[7] As a robustness check, we also used 2-year- and 5-year-ahead inflation expectations in these regressions in the place of 1-year expectations. The link to 2-year-ahead inflation expectations is about 0.1–0.2 (similar to the link with 1-year expectations). However, the link to 5-year-ahead inflation expectations is much weaker, about 0.05.

in the U.S. and Canada.

4.2.3 Time variation in the link between expected wages and inflation

The finding that inflation expectations do not feed strongly into the outlook for wage growth suggests that a wage-price spiral is unlikely to occur at this point, and this result deserves further exploration and discussion. Has the strength of this link changed over time? And has it become stronger in 2021 when inflation increased and attracted more attention from policy makers and the media? To understand time variation in this link, we estimate the wage expectations regression (equation (2)) for each quarter of the survey and then plot the estimated coefficient on inflation expectations over the sample period, in Figure 5. This figure also plots correlations between wage growth expectations and inflation expectations for each quarter, which remain low and stable during the sample period. The estimated coefficient in the relationship between wage growth and inflation expectations is somewhat volatile. However, it does not exhibit any clear trend. There are a couple of instances when this coefficient rises above 0.5, but these instances are short lived. In the later part of our sample when inflation reached higher levels, this coefficient remained low, suggesting that the link between wage growth and inflation expectations remained weak irrespective of whether Canada was in a low-inflation or high-inflation environment. It would be interesting to understand whether this link would change if inflation were persistently high.

4.2.4 Wage indexation, public and private sectors

Next, we explore whether the link between expectations about wages and inflation is different for workers with wages indexed to inflation or for workers employed in the public or private sector. In 2021Q4, the CSCE included a question to assess the link between wages and inflation and the prevalence of indexation of wages to inflation. Starting in 2018Q2, the CSCE included a question about the sector of employment (this question is included in Appendix A). About 19 percent of respondents had a cost of living adjustment (COLA) in their contract; the employer adjusted the pay of another 18 percent of respondents to inflation without a formal COLA. However, the pay of the majority of the respondents (63 percent) was not adjusted to inflation. About 30 percent of CSCE respondents were employed in the public sector, with the rest employed in the private sector. The prevalence of formal and informal indexation was similar across these sectors with slightly higher indexation in the public sector (COLA: 18 percent in the private and 20 percent in the public sector; informal indexation: 19 percent in the private and 17 percent in the public sector).

We estimate the link between expected wages and inflation separately for groups with wage indexation and without indexation. We include those with COLA in a group with indexation.[8] Table 4 presents results for the first definition of indexation. Expected wages are not significantly linked to expected inflation for those with COLA indexation (or with informal indexation). It is likely because their wages are linked to past inflation, not expected inflation. Interestingly, the link to actual past inflation is negative and significant.

To further examine the weak link between wage growth expectations and inflation expectations, we divide the survey respondents into two groups – those reporting work in the public sector and those in the private sector. Workers in the private sector have both higher perceptions about past wage growth and higher expectations about future wage growth (Figure 6). We repeat the estimation of the wage growth expectations regression with the goal of determining if the link between wage growth expectations and

[8]Our results are robust to expanding the group with indexation to include those with COLA and informal indexation.

inflation expectations (or inflation perceptions) differs between these two groups. The estimation results are shown in Table B1 with Panel A depicting the group of respondents who reported working in the public sector and Panel B depicting those who reported working in the private sector. The link between wage growth expectations and expected inflation is slightly higher in the private sector than in the public sector in most of our estimations. Interestingly, the link between expected wages and inflation perceptions is stronger in the private sector too. When compared to the full-sample estimation in Table 3, the link between wage growth expectations and inflation expectations is somewhat lower for the public sector respondents and somewhat higher for the private sector respondents for most labour market indicators. Hence, respondents working in the public sector have a weaker than average association between wage growth expectations and inflation expectations. This likely reflects the higher prevalence of indexation in the public sector to past inflation than in the private sector. In the private sector, it could be less likely that wages are consistently adjusted for inflation, or the size of adjustment may fluctuate year to year and, hence, expected wages are more closely aligned with respondents' inflation expectations and perceptions.

4.2.5 Estimation with real wage growth expectations

So far we have studied nominal wage growth expectations. However, real wages may be more important for people, so in this section we analyze expected real wage growth. Real wage growth expectations can be computed as the difference between expected nominal wage growth and expected inflation rate over the next 12 months. We estimate wage expectations equation (2) with expected real wage growth as a dependent variable and present results in Table 5. The persistence of real wage growth expectations is similar to the persistence in nominal wage growth expectations (around 0.2). The relationship between real wage growth expectations and expected inflation is negative and significant in all specifications with the different labour market indicators, indicating that an increase in inflation expectations of 1 p.p. is associated with a 0.7 p.p. reduction in real wage growth expectations. This finding is consistent with our results about nominal wage growth expectations – people don't expect their real wages to keep up with expected inflation. In effect, workers expect inflation to erode their real wages.

4.3 Inflation and wage expectations: what matters for spending and how?

Our analysis of household-level data indicates that households view price inflation as bad for the aggregate labour market and their own job situation, whereas wage expectations are associated with stronger labour market conditions. Next, we seek to understand how these views translate into the relationship between households' inflation and wage expectations and their spending growth expectations. Standard macroeconomic models suggest that higher inflation expectations lead to higher spending. However, such a prediction may not be accurate if consumers view higher inflation as bad for the economy and associate higher inflation with a worse labour market. To the contrary, consumers may want to contract their spending if they expect higher inflation. We test this hypothesis using our household-level survey data.

We estimate the link between expected real spending growth and expected inflation, with results reported in Table 6, and the link between expected real spending and wage expectations, with results in Table 7. In our estimations, we use expected inflation over the next 12 months (specifications 1–3) and also perceptions about past inflation (specifications 4–6), as people's views about future spending could also be linked to what they think inflation was in the past. Similarly in the analysis of spending and wages, we use expected wage growth (specifications 1–3) and past wage growth (specifications 4–6), as spending plans may be linked to people's past earnings. In our analysis, we control for labour market conditions using the same labour market indicators as in the analysis of inflation and wage expectations above. We also control for expectations for

real household income growth.

4.3.1 Linking spending with expected inflation and wages

Table 6 shows that households' expected real spending growth is negatively linked to their inflation expectations or their perceptions about past inflation. In other words, households expecting higher inflation expect weaker spending growth, controlling for household demographic characteristics, expectations for income and views of labour market conditions. The negative link of real spending growth to views about inflation is robust across specifications. Thus, our evidence does not support predictions from standard macro models about higher spending when inflation expectations are higher.[9] This finding has important implications for central bank communication strategies aimed at boosting inflation expectations. Such strategies may not lead to the desired outcome of boosting spending as households view higher inflation as bad for jobs, leading to lower spending growth.

Our finding of a negative link between spending and expected inflation supports the conjecture in Candia et al. [2020] that higher expectations may lead to lower spending intentions if households associate higher inflation with a weaker economy and labour market. Our result is also closely related to Coibion et al. [forthcoming] and Binder and Brunet [2022]. Using an information experiment from Dutch households, Coibion et al. [forthcoming] find that higher inflation expectations are linked with lower purchases of durables. Based on the 1951 Survey of Consumer Finances, Binder and Brunet [2022] show that people with higher inflation expectations are less likely to expect to buy a car in the future. However, they present evidence of people with higher inflation expectations shifting to spending earlier.

However, other papers have estimated the link between consumers' spending expectations or intentions to purchase goods and inflation expectations and found a positive association. For example, Crump et al. [2015] find a positive link between expected spending growth and inflation expectations using the New York FRB's SCE, which is consistent with a theoretical Euler equation. Drager and Nghiem [2020] and Drager et al. [2016] also find a positive link between spending intentions and inflation expectations. Based on a randomized control trial, Coibion et al. [2022] find that positive revisions in inflation expectations are associated with higher actual *total* spending. However, this link between spending and inflation expectations disappears 6 months after the information treatment. Their estimate includes several possible channels through which inflation expectations can affect spending. These include a positive link from intertemporal substitution and a negative link from an expected reduction in real wages. Lastly, the effect on spending intentions comes from people's interpretation of inflation as being linked to either a stronger or a weaker economy. In our analysis we are able to control for these factors by including real household income growth and indicators of labour market conditions. Based on this analysis, the negative link between real spending and inflation expectations can be attributed to how people view inflation – consumers associate inflation with weaker labour market indicators, as discussed in section 4.

In contrast to our results of a negative link between real spending and expected inflation, we find that expected real spending growth is positively linked to wage growth expectations, as shown in Table 7. Expected real spending is also positively linked to workers' past wage growth. This positive link between views of wage growth and real spending can be attributed to people viewing stronger wage growth as positively

[9]This finding is robust to using inflation expectations at different horizons, although the quantitative strength of the link declines with the horizon of inflation expectations. Across specifications with different labour controls, the link is -0.5–0.25 for 2-year-ahead inflation expectations and -0.15–0.05 for 5-year-ahead inflation expectations.

linked to the labour market conditions and their own job prospects. However, the positive link to expected wage growth becomes statistically insignificant once we control for expected real household income growth (column (3) in all the panels in Table 7). Given that both spending and income growth expectations are elicited for the household level, it's not surprising that household income matters more for households' spending than respondents' own hourly wage growth expectations. However, the relationship between expected real income growth and past wage growth remains positive and statistically significant even after controlling for household real income (column (6) in all the panels in Table 7). The robustness of the link to past wage growth may be because of a stronger link to respondents' realized wage gains that can be readily used in spending compared with expected future wage gains.

4.3.2 Role of income and labour prospects

We would like to note the importance of expectations for income growth. Real income growth expectations are positively linked to real spending as would be expected, and this link is robust across specifications in Tables 6 and 7. The link between spending growth and inflation expectations remains negative and statistically significant even with the inclusion of income in the regression (specification 4, Table 6), although wage expectations become insignificant after controlling for household income (specification 4, Table 7), as discussed above. This suggests that the outlook for household real income is a key input for real spending intentions of the household, rather than the expected nominal wage growth of the respondent.

Expected spending is also linked to labour market conditions, with the most robust link to the outlook about respondents' own labour conditions such as job stability and prospects (probability of job losing and job finding). Spending expectations are not linked to the aggregate labour market statistics such as the provincial unemployment rate (Panel A of Tables 6 and 7), as household-level conditions are much more relevant for households' spending intentions. Thus, higher expectations about spending are associated with a lower likelihood of losing a job or a higher likelihood of finding a job (Panels D and E of Tables 6 and 7). However, the link to the probability of job losing disappears once controlling for household income (specification 4, Panel E, Tables 6 and 7). Consumers reporting higher chances that the Canadian unemployment rate will be lower have higher spending expectations (Panel C of Tables 6 and 7), although this link disappears in regressions with inflation expectations once controlling for household income growth (Panel C, specification 3, Table 6). Finally, lower expected spending is associated with an unemployed status (specifications 3 and 6, Panel F, Table 6).

4.3.3 Respondents' actions in light of their inflation expectations

Next, we discuss the link between inflation expectations and some intended actions in light of these expectations. We present estimation results of regression equation (4), in Table 8. The marginal effects are reported here. In these estimations, we drop observations with conflicting options such as choosing "bring forward purchases" and "postponing major purchases" at the same time. In Panel G "No action," we further drop observations where the option "take no action" is selected along with another action, as these selections are contradictory.

The key observation from these regressions is the positive and significant coefficient on inflation expectations and inflation perceptions for all of the considered actions. In the case of the option "Take no action," the relationship is negative and significant. Our results suggest that higher inflation expectations and per-

ceptions are associated with a higher likelihood of lowering spending such as postponing major purchases, cutting back spending and saving more, shopping around for better value as well as a higher likelihood of taking some action related to increasing income such as pushing for increased pay and looking for other ways to increase income. Furthermore, respondents with higher inflation expectations are less likely to choose "take no action," suggesting that higher inflation expectations call for some action among consumers. First, these findings are consistent with the negative link between inflation expectations and real spending growth, discussed in Section 4.3. Second, our findings about the positive link between inflation expectations and postponing major purchases and cutting spending/saving more are consistent with the results obtained in Coibion et al. [forthcoming], who find that Dutch households with increased inflation expectations reduce their spending on durables. While higher inflation expectations are positively linked with the action "push to increase pay with current employer," the link is quantitatively weak. This result is consistent with the weak link between expected wage growth and inflation expectations discussed above. Higher inflation expectations are more strongly linked with actions aimed to increase their income through changing a job, taking an additional job or working more, than they are with pushing for higher wages with their current employer.

We would like to further discuss the results regarding "bring forward major purchases." Table 8 indicates a positive and statistically significant link between this action and inflation expectations and inflation perceptions. The positive link between "bring forward major purchases" and inflation expectations/perceptions is remarkably similar to the positive link between "postpone major purchases" and "spend less/save more" and inflation expectations/perceptions. This suggests to us that survey respondents may interpret the phrase "bring forward major purchases" as "make major purchases later," i.e., "postpone major purchases." This is in contrast to its use in professional economic jargon in which the phrase "bring forward" is usually interpreted by economists as "make purchases earlier."

We make use of a variation of this question to further study this issue. In 2022Q2, the CSCE used two versions of the question about actions in light of inflation expectations. People were randomly assigned to one of two groups. Group A answered the version of this question with the option "bring forward major purchases," while Group B answered the version of this question with "make major purchases earlier" instead of "bring forward major purchases." The rest of the options were the same. Table 9 presents the results of estimations for each of these two groups. The action "bring forward major purchases" is positively but not significantly linked to expected inflation. The action "make major purchases earlier" is positively and significantly linked to expected inflation. The rest of the actions also have a positive and significant link with inflation expectations, as in Table 8, although not reported here.[10]

These results indicate that higher inflation expectations are positively linked with "making major purchases earlier" for some people and are positively linked with "postpone major purchases" for other people. The positive link between inflation expectations and "making purchases earlier" is consistent with standard macroeconomic models, suggesting a positive link between expected inflation and spending, and with some empirical findings in Drager et al. [2016] and Drager and Nghiem [2020]. Our results provide additional evidence about the heterogeneity of the responses across respondents: some react by making purchases earlier whereas others choose to postpone major purchases.

Overall, our results indicate people view inflation as associated with worse economic outcomes and correspondingly reduce or postpone spending when they expect higher inflation.

[10]These results are available upon request.

4.4 Have relationships changed since the start of the COVID-19 pandemic?

We also explore the possibility that the relationships studied in this paper might have changed since the start of the COVID-19 pandemic. We have included the dummy variable *PostCovid*, which equals to one for the quarters 2020Q2 and later and zero otherwise, and an interaction term between the indicators of labour market conditions and the PostCovid dummy in the regressions on inflation and wage expectations. Results are presented in Table B2 for inflation expectations and in Table B3 for wage growth expectations.

Overall, the analysis of estimations indicates that the relationship between inflation expectations and labour market indicators is not different since the pandemic. However, for the "probability of the unemployment rate is higher" labour market indicator, the link becomes more negative after the COVID pandemic, as shown in all the specifications in Panels B and E in Table B2.

We reach a somewhat similar conclusion about the link between expected wages and labour indicators – that it has not changed since the start of the pandemic for most of the labour market variables. This link becomes weaker with the provincial unemployment rate (Panel A in Table B3) and the probability of losing current job (Panel E in Table B3).

We also explore whether the link between expected real spending and inflation or wage expectations has changed since the pandemic. Tables B4 and B5 present results for spending regressions on inflation expectations and wage expectations with interaction terms. We find that the relationship between expected spending and inflation has remained the same since the pandemic in all specifications. In contrast, the link between spending and wage expectations became stronger after the pandemic, and this finding is robust across different specifications and controlling for all labour market indicators, as shown in columns (1) to (3) in all the panels in Table B5. The link with wage perceptions has not changed since the start of the pandemic.

5 Conclusions

Central banks follow the developments in the labour market as part of understanding the evolution of economic activity, inflation dynamics and the consequent implications for monetary policy decision making.[11] Many questions have become important: How do people view inflation and form inflation expectations? How are people's inflation expectations linked to their views of labour market conditions? How do these views affect their spending? What is the link between inflation expectations and expectations about wages? Households' expectations affect their decisions, thus developing an understanding of the underlying drivers of their decisions and whether they are consistent with the assumption inherent in the macroeconomic models used to formulate monetary and fiscal policies is vital.

This paper set out to understand the link between inflation and the labour market using both price and wage inflation expectations. Our household-level analysis uncovers some interesting differences between price and wage inflation: households appear to have a supply-side view of price inflation and a demand-side view of wage inflation. That is, price inflation is associated with worse labour market outcomes, while wage

[11] The Bank of Canada, for example, has covered developments in the labour market in its Monetary Policy Report and pays careful attention to its evolution and recovery especially since the COVID-19 outbreak [Monetary Policy Report, 2021]. The impact of the pandemic has been unprecedented on the Canadian economy as it affected the labour market and inflation. The labour market has been recovering and has showed important improvements since the pandemic began. However, the inflation rate is currently at its highest since early 2003. In this macroeconomic context, it is key to understanding the relationship between inflation and labour market conditions, as discussed in Schembri [2021].

inflation is associated with improving labour market outcomes. Consumers tend to view price inflation as "bad": higher inflation is associated with a weaker labour market. On the other hand, a stronger labour market tends to be linked with expectations of higher wage gains. Thus, consumers view price and wage inflation very differently. These results indicate that wage growth expectations may be a better indicator of price pressures coming from economic activity and the labour market than inflation expectations.

Our analysis also highlights two common results between wage and price inflation. First, there does not appear to be a statistically significant link between either inflation expectations or wage growth expectations and the official aggregate unemployment statistics. However, there is a robust link between these expectations to respondents' own views about Canadian unemployment rate and their individual expectations about their own labour market outcomes such as losing their job or finding a new job. This finding also suggests that to develop a better understanding of how households form their inflation expectations, it is important to solicit households for their views of their own labour market situation. Drawing a comparison between households' views on inflation and official labour market statistics is not likely to be very informative.

The second common result in our work is that perceptions about past inflation or reported past wage growth have significant explanatory power in understanding expected future inflation or expected future wage growth. A statistically significant and quantitatively strong link to past dynamics suggests substantial persistence in both inflation expectations and wage growth expectations where their views about the past feed prominently into future dynamics.

When we explore the linkages between inflation and households' expected spending decisions, we find that higher inflation expectations are associated with lower real spending growth, controlling for income expectations, labour force status and demographic characteristics. Conversely, expected real spending growth is positively linked to past wage growth expectations. Thus, associating higher inflation with a weaker labour market has implications for the communication strategies of the central bank aiming at encouraging inflation expectations in hopes of stimulating demand, as conjectured by Candia et al. [2020]. Our paper provides evidence for such caution.

To the best of our knowledge, our paper is the first in the literature to report results of wage growth expectations on consumer expectations, and its analysis alongside price inflation expectations highlights an important area for future research: is it sufficient to examine only price inflation or wage inflation expectations alone, or should the two be analyzed together? Perhaps one form of expectations may be better able to capture certain economic factors that the other cannot.

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Figure 1: Inflation expectations of consumers and actual inflation in Canada

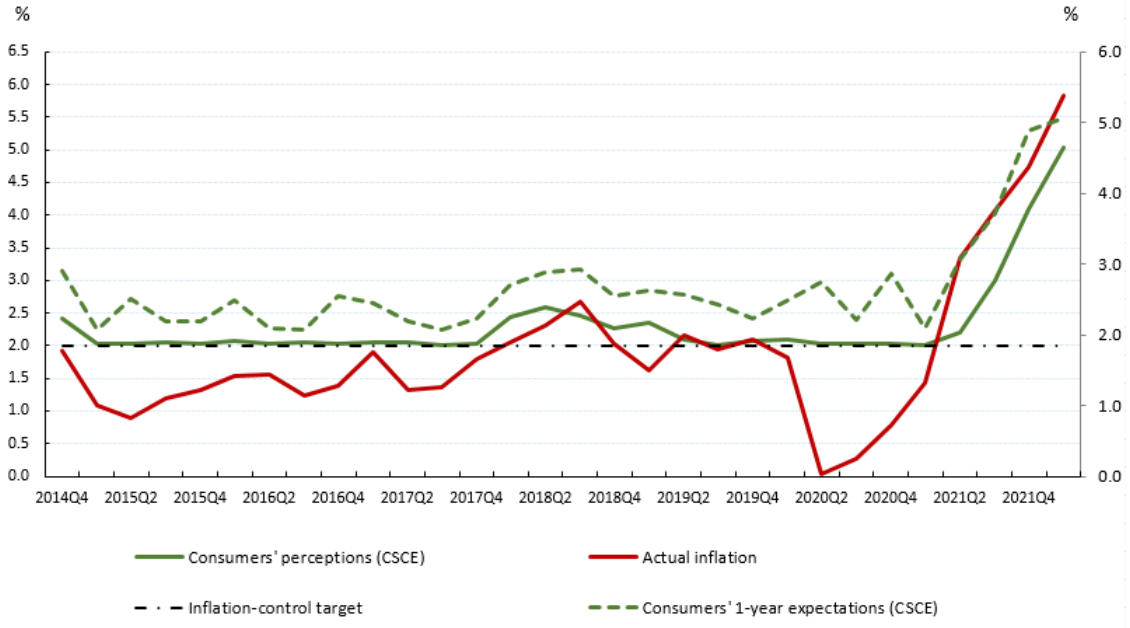


Figure 2: Workers' expectations of wage growth and actual wage growth in Canada

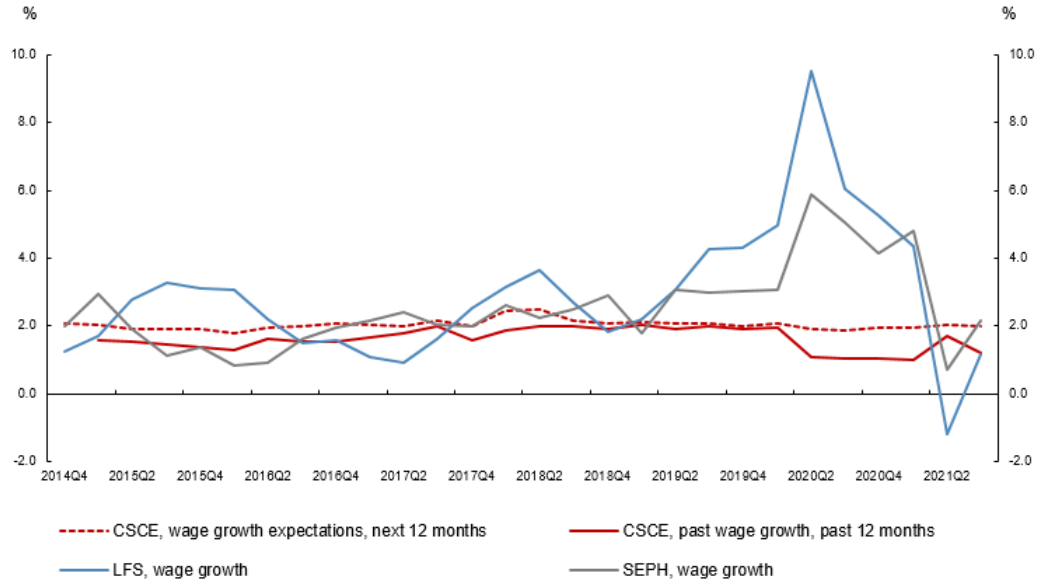


Figure 3: Unemployment rate in Canada, by province

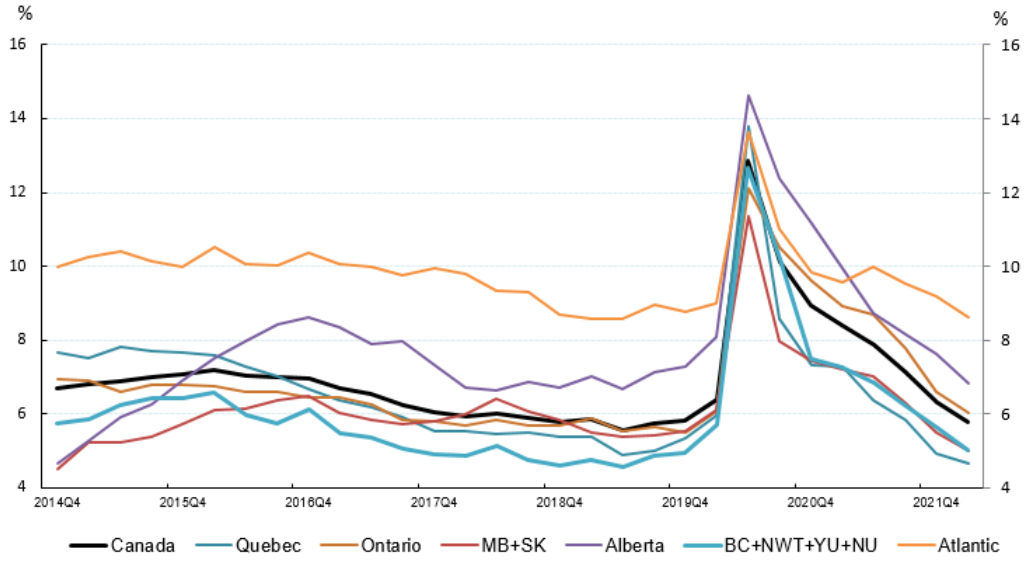
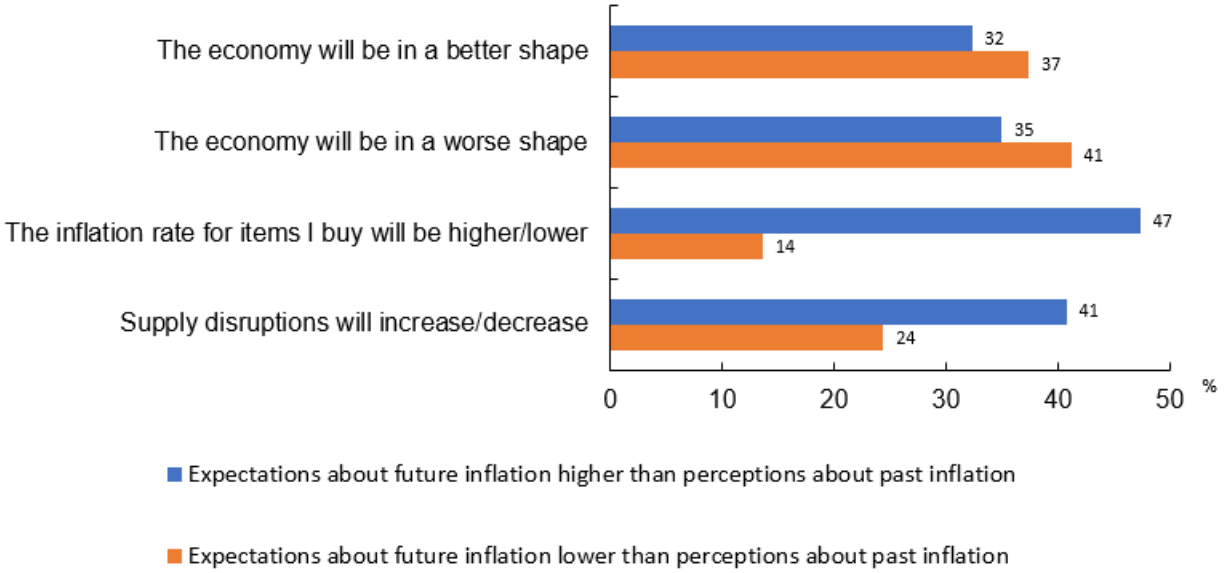
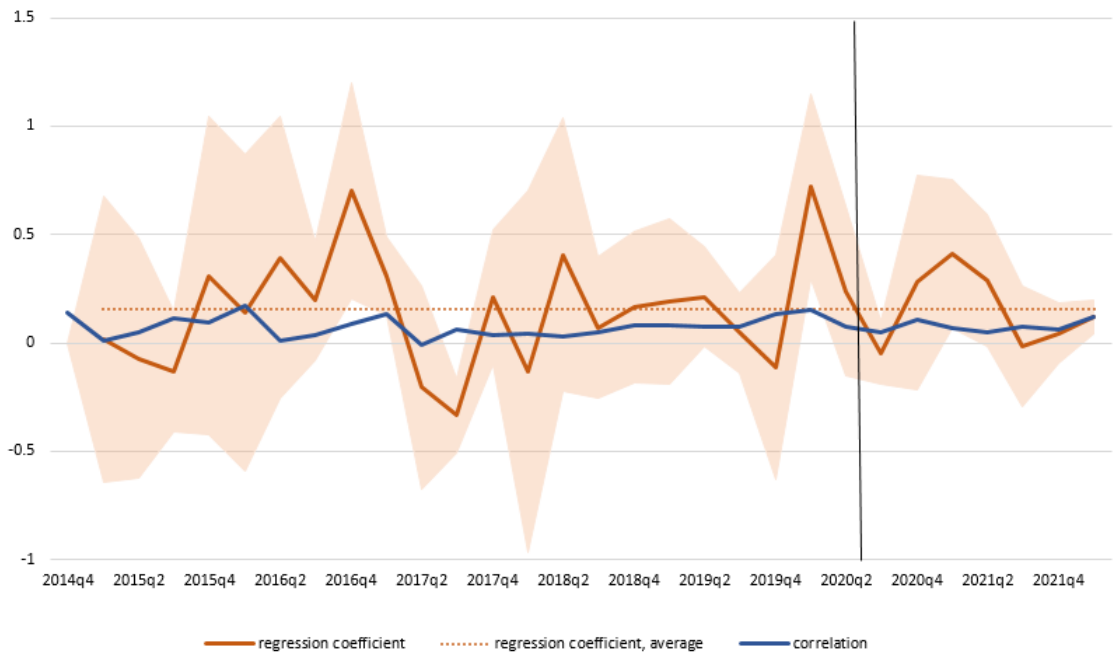


Figure 4: Consumers' responses about reasons for expecting higher or lower inflation in the future than in the past



Notes: This figure presents responses to the following survey question posed to the respondents whose expectations for future inflation were higher or lower than their perceptions about past inflation. Question: *"Your responses indicate that you expect that the inflation rate will be higher (lower) over the next 12 months than it was over the last 12 months. Why do you think that the rate of inflation will be higher (lower)?"* This figure shows shares of respondents who chose each of the presented explanations.

Figure 5: Wave-by-wave correlation and coefficient



Notes: This figure presents the correlation between inflation expectations and wage growth expectations as well as the coefficient of inflation expectations in the wage growth expectation regressions for each wave of the survey. The shaded area represents the 90% confidence interval for the regression coefficient.

Figure 6: Workers' perceptions and expectations about future wage growth in the private and public sectors

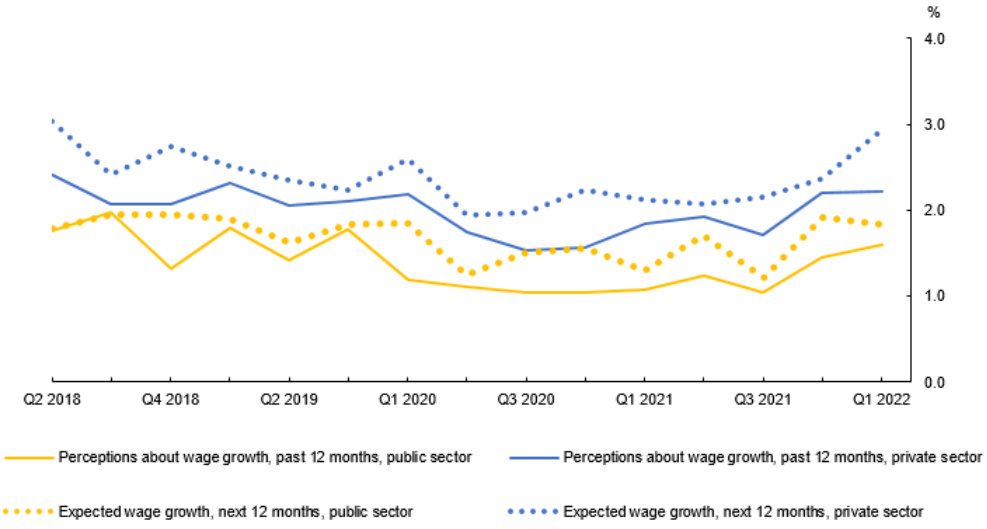


Table 1: Summary statistics by demographic characteristics (interpolated median, %)

	Inflation perception	Inflation expectation	Wage Growth perception	Wage Growth expectation	Prob. of losing a job	Prob. of finding a job	Spending expectation
Age Category							
Less than 35 years	2.1	2.1	2	2.1	10.2	51	4.6
35 to 54 years	2	2.5	1.6	2	9.1	49.7	3
55 to 64 years	2.5	3	1.4	1.9	4.9	47.9	3
65 years and older	2.1	2.7	1	1.9	2.1	19.1	3
Gender							
Male	2.1	2.4	2	2	9.5	49.8	3.1
Female	2.5	2.9	1.1	2	7	49.7	3.1
Labour Force Status							
Not in labour force	2.1	3	NA	NA	NA	NA	3
Unemployed, in LF	2.8	3	NA	NA	NA	NA	4.7
Employed	2	2.5	2	2	9.1	49.8	3.1
Income category							
Less than $59,999	2.9	3	1.1	1.9	10.1	49.1	3.6
$60,000 to $99,999	2	2.9	1.9	2	9.5	50	3
$100,000 to $199,999	2.1	2.1	2	2	5.9	50	3.3
$200,000 or more	2	2.1	2.1	2.1	5.1	50.4	3.3
Relationship							
Yes	2	2.5	1.9	2	8.4	49.9	3.2
No	2.1	2.9	2	2	9.4	49.6	3
Children							
With children	2	2.6	1.9	2	9.2	50	3.9
No children	2.1	2.5	2	2	9	49.6	3

Table 2: Estimation results for regressions with inflation expectations

	(1)	(2)	(3)	(4)	(5)
Panel A: Provincial unemployment rate (Full sample)					
$E_{i,t}\pi_{t-12}$			0.758***	0.748***	0.749***
			(0.011)	(0.012)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.527***	0.005	-0.018	-0.018	-0.028
	(0.051)	(0.059)	(0.042)	(0.042)	(0.057)
UR_t^{prov}	0.132***	-0.083*	0.006	-0.004	-0.062
	(0.019)	(0.042)	(0.034)	(0.033)	(0.042)
Observations	40,086	38,961	40,078	38,953	22,786
Adjusted R-squared	0.019	0.060	0.588	0.590	0.592
Panel B: Prob UR Higher (Full sample)					
$E_{i,t}\pi_{t-12}$			0.765***	0.757***	0.761***
			(0.014)	(0.014)	(0.019)
$E_{i,t}\text{wage}_{i,t+12}$					0.002
					(0.003)
π_{t-1}^{prov}	0.508***	0.078	0.004	0.012	0.043
	(0.056)	(0.083)	(0.057)	(0.058)	(0.081)
Prob. UR higher	0.022***	0.020***	0.009***	0.009***	0.010***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)
Observations	20,022	19,466	20,019	19,463	11,364
Adjusted R-squared	0.033	0.074	0.597	0.597	0.600
Panel C: Prob UR Lower (Full sample)					
$E_{i,t}\pi_{t-12}$			0.745***	0.735***	0.733***
			(0.014)	(0.015)	(0.020)
$E_{i,t}\text{wage}_{i,t+12}$					0.018***
					(0.004)
π_{t-1}^{prov}	0.412***	-0.049	-0.037	-0.042	-0.077
	(0.061)	(0.077)	(0.054)	(0.055)	(0.076)
Prob. UR lower	-0.009***	-0.010***	-0.006***	-0.006***	-0.006***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Observations	20,058	19,489	20,053	19,484	11,419
Adjusted R-squared	0.016	0.062	0.583	0.585	0.589

Continuation of Table

	(1)	(2)	(3)	(4)	(5)
Panel D: Provincial unemployment rate (LF=1)					
$E_{i,t}\pi_{t-12}$			0.762***	0.755***	0.749***
			(0.014)	(0.015)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.537***	-0.024	-0.049	-0.048	-0.028
	(0.060)	(0.080)	(0.051)	(0.051)	(0.057)
UR_t^{prov}	0.133***	-0.091*	-0.026	-0.040	-0.062
	(0.024)	(0.052)	(0.039)	(0.039)	(0.042)
Observations	25,394	24,703	25,387	24,696	22,785
Adjusted R-squared	0.018	0.056	0.591	0.593	0.592
Panel E: Prob UR Higher (LF=1)					
$E_{i,t}\pi_{t-12}$			0.764***	0.759***	0.761***
			(0.017)	(0.018)	(0.019)
$E_{i,t}\text{wage}_{i,t+12}$					0.002
					(0.003)
π_{t-1}^{prov}	0.505***	0.061	0.024	0.031	0.043
	(0.072)	(0.102)	(0.074)	(0.075)	(0.081)
Prob. UR higher	0.022***	0.021***	0.010***	0.010***	0.010***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)
Observations	12,692	12,353	12,690	12,351	11,363
Adjusted R-squared	0.031	0.067	0.597	0.597	0.600
Panel F: Prob UR Lower (LF=1)					
$E_{i,t}\pi_{t-12}$			0.756***	0.747***	0.733***
			(0.019)	(0.019)	(0.020)
$E_{i,t}\text{wage}_{i,t+12}$					0.018***
					(0.004)
π_{t-1}^{prov}	0.436***	-0.089	-0.114*	-0.115*	-0.077
	(0.064)	(0.115)	(0.067)	(0.067)	(0.076)
Prob. UR lower	-0.009***	-0.009***	-0.006***	-0.005***	-0.006***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Observations	12,699	12,347	12,694	12,342	11,419
Adjusted R-squared	0.016	0.059	0.589	0.593	0.589

Continuation of table					
	(1)	(2)	(3)	(4)	(5)
Panel G: Prob of finding a job					
$E_{i,t}\pi_{t-12}$			0.758***	0.751***	0.749***
			(0.015)	(0.015)	(0.015)
$E_{i,t}wage_{i,t+12}$					0.009***
					(0.003)
$E_{i,t}wage_{i,t+12}$	0.473***	0.036	-0.019	-0.020	-0.022
	(0.064)	(0.085)	(0.057)	(0.057)	(0.058)
Prob. of finding a job	-0.002	-0.000	-0.001	-0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	23,438	22,794	23,431	22,787	22,782
Adjusted R-squared	0.018	0.057	0.589	0.592	0.592
Panel H: Prob of losing a job					
$E_{i,t}\pi_{t-12}$			0.756***	0.749***	0.747***
			(0.015)	(0.015)	(0.015)
$E_{i,t}wage_{i,t+12}$					0.010***
					(0.003)
π_{t-1}^{prov}	0.459***	0.040	-0.019	-0.019	-0.021
	(0.060)	(0.084)	(0.057)	(0.057)	(0.057)
Prob. of losing a job	0.020***	0.017***	0.005***	0.004***	0.005***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Observations	23,432	22,788	23,425	22,781	22,776
Adjusted R-squared	0.028	0.065	0.590	0.592	0.592
Panel I: Unemployed dummy					
$E_{i,t}\pi_{t-12}$			0.762***	0.755***	0.749***
			(0.014)	(0.015)	(0.015)
$E_{i,t}wage_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.455***	-0.018	-0.048	-0.046	-0.023
	(0.063)	(0.081)	(0.051)	(0.051)	(0.058)
unemployed dummy	0.958***	0.494***	0.405***	0.286**	
	(0.153)	(0.162)	(0.104)	(0.111)	
Observations	25,394	24,703	25,387	24,696	22,785
Adjusted R-squared	0.018	0.056	0.591	0.593	0.592

Notes: The estimation results for equation (1) are presented for several specifications. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is perceptions about inflation + province and date. Column (4) is Column (3) + perceptions of inflation. Column (5) is Column (4) + wage growth expectations. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3: Estimation results for regressions with wage growth expectations

	(1)	(2)	(3)	(4)	(5)
Panel A: Provincial unemployment rate					
$E_{i,t}wage_{i,t-12}$			0.222***	0.212***	0.210***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.180***
					(0.022)
π_{t-1}^{prov}	0.381***	0.118	-0.021	-0.017	-0.012
	(0.116)	(0.193)	(0.183)	(0.186)	(0.187)
UR_t^{prov}	-0.140***	-0.127	-0.003	-0.019	0.003
	(0.054)	(0.107)	(0.117)	(0.118)	(0.115)
Observations	23,450	22,805	22,903	22,263	22,253
Adjusted R-squared	0.004	0.018	0.079	0.083	0.089
Panel B: Prob UR Higher					
$E_{i,t}wage_{i,t-12}$			0.236***	0.228***	0.225***
			(0.029)	(0.030)	(0.030)
$E_{i,t}\pi_{t+12}$					0.149***
					(0.033)
π_{t-1}^{prov}	0.602***	0.151	-0.103	-0.055	-0.064
	(0.140)	(0.287)	(0.283)	(0.285)	(0.288)
Prob. UR higher	-0.011*	-0.013**	-0.004	-0.005	-0.008
	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)
Observations	11,691	11,372	11,419	11,102	11,097
Adjusted R-squared	0.006	0.024	0.091	0.097	0.101
Panel C: Prob UR Lower					
$E_{i,t}wage_{i,t-12}$			0.203***	0.193***	0.191***
			(0.025)	(0.025)	(0.025)
$E_{i,t}\pi_{t+12}$					0.221***
					(0.030)
π_{t-1}^{prov}	0.279***	0.063	0.035	-0.025	-0.009
	(0.106)	(0.247)	(0.258)	(0.260)	(0.259)
Prob. UR lower	0.035***	0.035***	0.034***	0.032***	0.034***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Observations	11,756	11,430	11,481	11,158	11,153
Adjusted R-squared	0.008	0.022	0.074	0.077	0.085

Continuation of Table

	(1)	(2)	(3)	(4)	(5)
Panel D: Prob of finding a job					
$E_{i,t}wage_{i,t-12}$			0.215***	0.207***	0.204***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.181***
					(0.022)
π_{t-1}^{prov}	0.437***	0.078	-0.056	-0.049	-0.046
	(0.100)	(0.190)	(0.183)	(0.186)	(0.187)
Prob. of finding a job	0.038***	0.034***	0.029***	0.027***	0.027***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	23,447	22,802	22,900	22,260	22,250
Adjusted R-squared	0.016	0.028	0.086	0.089	0.095
Panel E: Prob of losing a job					
$E_{i,t}wage_{i,t-12}$			0.220***	0.210***	0.207***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.190***
					(0.022)
π_{t-1}^{prov}	0.480***	0.120	-0.022	-0.018	-0.016
	(0.103)	(0.191)	(0.182)	(0.185)	(0.185)
Prob. of losing a job	-0.022***	-0.025***	-0.013***	-0.016***	-0.019***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Observations	23,441	22,796	22,895	22,255	22,245
Adjusted R-squared	0.005	0.021	0.079	0.084	0.090

Notes: The estimation results for equation (2) are presented for several specifications. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is perceptions of past wage growth + province and date. Column (4) is Column (3) + perceptions of past wage growth. Column (5) is Column (4) + inflation expectations. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4: Estimation results for regressions with wage expectations for respondents whose pay is indexed to inflation

	(1)	(2)	(3)	(4)	(5)	(6)
$E_{i,t}\text{wage}_{i,t-12}$	0.223	0.217	0.202	0.196	0.212	0.208
	(0.244)	(0.246)	(0.239)	(0.242)	(0.232)	(0.235)
$E_{i,t}\pi_{t+12}$	0.056	0.194	0.044	0.177	-0.003	0.098
	(0.148)	(0.131)	(0.128)	(0.112)	(0.144)	(0.118)
$E_{i,t}\pi_{t-12}$		-0.200**		-0.191*		-0.145
		(0.085)		(0.100)		(0.102)
π_{t-1}^{prov}	-1.125	-1.271	-1.089	-1.245	-1.210	-1.324
	(1.331)	(1.321)	(1.377)	(1.402)	(1.489)	(1.509)
UR_t^{prov}	-0.250	-0.182				
	(0.369)	(0.361)				
Prob. of losing a job			0.036	0.035		
			(0.022)	(0.022)		
Prob. of finding a job					0.058*	0.056*
					(0.028)	(0.028)
Observations	134	134	134	134	134	134
Adjusted R-squared	0.018	0.018	0.035	0.034	0.076	0.072

Notes: The estimation results for equation (2). The sample is from the survey responses in 2021Q4 and is restricted to the respondents whose pay was indexed to inflation. Column (1) includes perceptions of past wage growth and inflation expectations and controls for demographic characteristics (age, gender, income, marital status, presence of children) and date. Column (2) is Column (1) + inflation perceptions. Columns (3) to (6) are analogous to (1) & (2). Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Estimation results for regressions with real wage expectations

	(1)	(2)	(3)	(4)	(5)
$E_{i,t}$Real wage$_{i,t-12}$	0.196***	0.193***	0.191***	0.208***	0.181***
	(0.020)	(0.020)	(0.020)	(0.029)	(0.023)
$E_{i,t}\pi_{t+12}$	-0.671***	-0.664***	-0.675***	-0.692***	-0.642***
	(0.026)	(0.026)	(0.026)	(0.037)	(0.035)
π_{t-1}^{prov}	0.009	0.006	-0.025	-0.056	0.025
	(0.190)	(0.189)	(0.190)	(0.291)	(0.261)
UR_t^{prov}	-0.007				
	(0.112)				
Prob. UR higher				-0.009*	
				(0.005)	
Prob. UR lower					0.035***
					(0.005)
Prob. of losing a job		-0.019***			
		(0.005)			
Prob. of finding a job			0.027***		
			(0.003)		
Observations	22,246	22,238	22,243	11,095	11,148
Adjusted R-squared	0.168	0.170	0.174	0.179	0.165

Notes: The estimation results for equation (2) are presented here using real wage growth expectations instead of nominal wage growth expectations. Different columns use different labour market indicators. Each column includes inflation expectations and real wage growth perception as well as controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Estimation results for regressions with real spending expectations and inflation expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Provincial unemployment rate (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.752***	-0.802***	-0.514***			
	(0.025)	(0.022)	(0.023)			
$E_{i,t}\pi_{t-12}$				-0.560***	-0.599***	-0.367***
				(0.027)	(0.025)	(0.023)
$E_{i,t}$income$_{t+12}$			0.313***			0.332***
			(0.012)			(0.012)
UR_t^{prov}	-0.307***	-0.011	0.024	-0.335***	-0.024	0.022
	(0.060)	(0.130)	(0.114)	(0.053)	(0.130)	(0.112)
Observations	36,343	35,333	33,018	36,337	35,327	33,012
Adjusted R-squared	0.081	0.099	0.242	0.045	0.063	0.227
Panel B: Prob UR Higher (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.713***	-0.779***	-0.516***			
	(0.034)	(0.032)	(0.032)			
$E_{i,t}\pi_{t-12}$				-0.535***	-0.589***	-0.386***
				(0.038)	(0.037)	(0.034)
$E_{i,t}$income$_{t+12}$			0.303***			0.321***
			(0.015)			(0.015)
Prob. UR higher	-0.005	-0.004	0.006	-0.011**	-0.010**	0.003
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Observations	18,159	17,656	16,473	18,156	17,653	16,470
Adjusted R-squared	0.073	0.098	0.241	0.041	0.062	0.226

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Prob UR Lower (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.783***	-0.821***	-0.517***			
	(0.031)	(0.028)	(0.028)			
$E_{i,t}\pi_{t-12}$				-0.568***	-0.600***	-0.349***
				(0.032)	(0.030)	(0.025)
$E_{i,t}\text{income}_{t+12}$			0.324***			0.343***
			(0.018)			(0.017)
Prob. UR lower	0.024***	0.017***	0.005	0.027***	0.021***	0.007
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Observations	18,179	17,672	16,541	18,176	17,669	16,538
Adjusted R-squared	0.086	0.103	0.244	0.048	0.065	0.228
Panel D: Prob of finding a job (LF=1)						
$E_{i,t}\pi_{t+12}$	-0.717***	-0.760***	-0.492***			
	(0.026)	(0.024)	(0.026)			
$E_{i,t}\pi_{t-12}$				-0.502***	-0.535***	-0.333***
				(0.028)	(0.026)	(0.025)
$E_{i,t}\text{income}_{t+12}$			0.320***			0.343***
			(0.016)			(0.016)
Prob. of finding a job	0.012***	0.006**	-0.007***	0.013***	0.007**	-0.008***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	21,025	20,456	19,276	21,020	20,451	19,271
Adjusted R-squared	0.083	0.102	0.237	0.041	0.059	0.220

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Prob of losing a job (LF=1)						
$E_{i,t}\pi_{t+12}$	-0.714***	-0.755***	-0.496***			
	(0.026)	(0.023)	(0.026)			
$E_{i,t}\pi_{t-12}$				-0.496***	-0.528***	-0.336***
				(0.027)	(0.025)	(0.025)
$E_{i,t}$income$_{t+12}$			0.319***			0.342***
			(0.016)			(0.016)
Prob. of losing a job	-0.006	-0.010**	0.007*	-0.011**	-0.014***	0.006
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
Observations	21,021	20,452	19,274	21,016	20,447	19,269
Adjusted R-squared	0.082	0.102	0.237	0.040	0.060	0.219
Panel F: Unemployed dummy (LF=1)						
$E_{i,t}\pi_{t+12}1$	-0.748***	-0.793***	-0.513***			
	(0.027)	(0.023)	(0.026)			
$E_{i,t}\pi_{t-12}$				-0.525***	-0.564***	-0.348***
				(0.030)	(0.027)	(0.026)
$E_{i,t}$income$_{t+12}$			0.310***			0.330***
			(0.014)			(0.014)
unemployed dummy	0.689	0.792	-1.365**	0.354	0.580	-1.644**
	(0.744)	(0.733)	(0.674)	(0.771)	(0.764)	(0.687)
Observations	22,821	22,211	20,941	22,816	22,206	20,936
Adjusted R-squared	0.079	0.102	0.246	0.039	0.061	0.229

Notes: The estimation results for equation (3) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that inflation perceptions are used instead of inflation expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7: Estimation results for regressions with real spending expectations and wage expectations

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Provincial unemployment rate (Full sample)						
$E_{i,t}wage_{i,t+12}$	0.207***	0.201***	0.017			
	(0.016)	(0.016)	(0.017)			
$E_{i,t}wage_{i,t-12}$				0.117***	0.105***	0.038***
				(0.012)	(0.012)	(0.011)
$E_{i,t}income_{t+12}$			0.356***			0.359***
			(0.018)			(0.016)
UR_t^{prov}	-0.217***	-0.041	0.015	-0.205***	0.122	0.161
	(0.050)	(0.173)	(0.150)	(0.051)	(0.156)	(0.140)
Observations	21,027	20,458	19,278	20,529	19,964	18,805
Adjusted R-squared	0.041	0.052	0.203	0.020	0.030	0.209
Panel B: Prob UR Higher (Full sample)						
$E_{i,t}wage_{i,t+12}$	0.209***	0.198***	0.002			
	(0.018)	(0.018)	(0.019)			
$E_{i,t}wage_{i,t-12}$				0.112***	0.096***	0.035**
				(0.016)	(0.016)	(0.016)
$E_{i,t}income_{t+12}$			0.371***			0.369***
			(0.024)			(0.022)
Prob. UR higher	-0.014***	-0.015***	0.004	-0.016***	-0.017***	0.002
	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)
Observations	10,489	10,210	9,618	10,243	9,965	9,382
Adjusted R-squared	0.044	0.053	0.223	0.019	0.028	0.229

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Prob UR Lower (Full sample)						
$E_{i,t}$wage$_{i,t+12}$	0.202***	0.200***	0.030			
	(0.025)	(0.025)	(0.027)			
$E_{i,t}$wage$_{i,t-12}$				0.122***	0.111***	0.041**
				(0.018)	(0.018)	(0.016)
$E_{i,t}$income$_{t+12}$			0.340***			0.347***
			(0.023)			(0.022)
Prob. UR lower	0.024***	0.021***	0.012**	0.029***	0.027***	0.012**
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
Observations	10,535	10,245	9,658	10,283	9,996	9,421
Adjusted R-squared	0.039	0.057	0.187	0.023	0.039	0.193
Panel D: Prob of finding a job						
$E_{i,t}$wage$_{i,t+12}$	0.206***	0.202***	0.018			
	(0.016)	(0.016)	(0.017)			
$E_{i,t}$wage$_{i,t-12}$				0.117***	0.105***	0.040***
				(0.012)	(0.012)	(0.011)
$E_{i,t}$income$_{t+12}$			0.358***			0.362***
			(0.018)			(0.016)
Prob. of finding a job	0.005*	-0.000	-0.010***	0.008***	0.003	-0.010***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	21,024	20,455	19,275	20,526	19,961	18,802
Adjusted R-squared	0.040	0.052	0.204	0.019	0.031	0.210

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Prob of losing a job						
$E_{i,t}$wage$_{i,t+12}$	0.206***	0.199***	0.016			
	(0.016)	(0.016)	(0.017)			
$E_{i,t}$wage$_{i,t-12}$				0.117***	0.103***	0.038***
				(0.012)	(0.012)	(0.011)
$E_{i,t}$income$_{t+12}$			0.356***			0.360***
			(0.018)			(0.016)
Prob. of losing a job	-0.018***	-0.019***	0.001	-0.016***	-0.018***	0.004
	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)
Observations	21,020	20,451	19,273	20,523	19,958	18,801
Adjusted R-squared	0.041	0.054	0.203	0.020	0.032	0.209

Notes: The estimation results for equation (3) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that wage growth perceptions are used instead of wage growth expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8: Estimation results of regressions for actions taken in light of 2-year-ahead inflation expectations, marginal effects

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Bring forward major purchases (Full sample)						
$E_{i,t}\pi_{t+24}$	0.001***	0.001***	0.001***			
	(0.000)	(0.000)	(0.000)			
$E_{i,t}\pi_{t-12}$				0.001***	0.001***	0.002***
				(0.000)	(0.000)	(0.000)
$E_{i,t}\text{income}_{t+12}$			0.000***			0.000***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469
Panel B: Cut back spending and save more						
$E_{i,t}\pi_{t+24}$	0.013***	0.010***	0.009***			
	(0.001)	(0.001)	(0.001)			
$E_{i,t}\pi_{t-12}$				0.010***	0.007***	0.006***
				(0.001)	(0.001)	(0.001)
$E_{i,t}\text{income}_{t+12}$			-0.001***			-0.001***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469
Panel C: Increase income (change job, take additional job, work more)						
$E_{i,t}\pi_{t+24}$	0.007***	0.005***	0.004***			
	(0.001)	(0.000)	(0.001)			
$E_{i,t}\pi_{t-12}$				0.005***	0.003***	0.003***
				(0.001)	(0.001)	(0.001)
$E_{i,t}\text{income}_{t+12}$			0.001***			0.001***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel D: Push to increase pay with current employer						
$E_{i,t}\pi_{t+24}$	0.002***	0.002***	0.002***			
	(0.000)	(0.000)	(0.000)			
$E_{i,t}\pi_{t-12}$				0.002***	0.001***	0.001***
				(0.000)	(0.000)	(0.000)
$E_{i,t}\text{income}_{t+12}$			0.001***			0.000***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469
Panel E: Postpone major purchases						
$E_{i,t}\pi_{t+24}$	0.008***	0.007***	0.006***			
	(0.000)	(0.001)	(0.001)			
$E_{i,t}\pi_{t-12}$				0.007***	0.006***	0.005***
				(0.000)	(0.000)	(0.001)
$E_{i,t}\text{income}_{t+12}$			-0.001***			-0.001***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469
Panel F: Shop around more for better value in goods/services						
$E_{i,t}\pi_{t+24}$	0.008***	0.006***	0.005***			
	(0.001)	(0.001)	(0.001)			
$E_{i,t}\pi_{t-12}$				0.007***	0.005***	0.003***
				(0.001)	(0.001)	(0.001)
$E_{i,t}\text{income}_{t+12}$			-0.001***			-0.001***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
			Panel G: No action			
$E_{i,t}\pi_{t+24}$	-0.017***	-0.015***	-0.014***			
	(0.001)	(0.001)	(0.001)			
$E_{i,t}\pi_{t-12}$				-0.014***	-0.011***	-0.010***
				(0.001)	(0.001)	(0.001)
$E_{i,t}\text{income}_{t+12}$			0.001***			0.001***
			(0.000)			(0.000)
Observations	30,966	29,872	26,465	30,972	29,876	26,469

Notes: The estimation results for the Probit regression equation (4) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that inflation perceptions are used instead of 1 to 2-year inflation expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9: Estimation results of regressions for actions taken in light of 2-year-ahead inflation expectations for groups A & B, marginal effects

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Bring forward major purchases (group A)						
$E_{i,t}\pi_{t+24}$	0.002	0.001	0.001			
	(0.003)	(0.003)	(0.004)			
$E_{i,t}\pi_{t-12}$				0.005***	0.004**	0.005**
				(0.002)	(0.002)	(0.002)
$E_{i,t}\text{income}_{t+12}$			-0.000			0.000
			(0.001)			(0.001)
Observations	836	752	551	836	752	551
Panel B: Make major purchases earlier (group B)						
$E_{i,t}\pi_{t+24}$	0.002**	0.002*	0.002**			
	(0.001)	(0.001)	(0.001)			
$E_{i,t}\pi_{t-12}$				0.000	0.000	0.000
				(0.001)	(0.001)	(0.001)
$E_{i,t}\text{income}_{t+12}$			0.001**			0.001*
			(0.001)			(0.001)
Observations	838	831	722	838	831	722

Notes: The estimation results for the Probit regression equation (4) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that inflation perceptions are used instead of 1 to 2-year inflation expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

A Survey questions

CSCE expectations about inflation and unemployment rate in Canada

Probability that unemployment rate will be higher/lower *Prob. UR higher/lower* is based on this question: What do you think is the percent chance that 12 months from now the unemployment rate in Canada will be [higher/lower] than it is now? *Please enter your response, where 0% means "Absolutely no chance" and 100% means "Absolutely certain".*

Perceptions about current inflation $\mathrm{E}_t\pi_{t-12}$ are based on the following questions:

Over the last 12 months, do you think that there has been inflation or deflation? (Note: deflation is the opposite of inflation.)
Please choose one.

- Inflation
- Deflation (the opposite of inflation)

What do you think the rate of [inflation/deflation] was over the last 12 months? Please give your best guess.
Please enter a number greater than 0 or equal to 0.

Over the last 12 months, the rate of [inflation/deflation] was ___ percent.

One-year-ahead inflation expectations $\mathrm{E}_t\pi_{t+12}$ are based on the following questions:

Over the next 12 months, do you think that there will be inflation or deflation? (Note: deflation is the opposite of inflation.)
Please choose one.

- Inflation
- Deflation (the opposite of inflation)

What do you expect the rate of [inflation/deflation] to be over the next 12 months? Please give your best guess.
Please enter a number greater than 0 or equal to 0.

Over the next 12 months, I expect the rate of [inflation/deflation] to be ___ percent.

CSCE respondent's own employment situation and expectations about wages

Labour market status (unemployed=1 if unemployed, =0 if employed is based on this question:
What is your current employment situation? *Please select all that apply.*

- Working full-time (for someone or self-employed)
- Working part-time (for someone or self-employed)
- Unpaid work (e.g. unpaid internship, volunteering, etc.)
- Not working, but would like to work
- Temporarily laid off
- On sick or other leave
- Permanently disabled or unable to work
- Retiree or early retiree
- Student, at school or in training
- Homemaker
- Other (please specify) ___

Probability of losing a job is based on the following question:
What do you think is the percent chance that you will lose your [main/current] job during the next 12 months? *Please enter your response in the box below, where 0% means "Absolutely no chance" and 100% means "Absolutely certain".*

Probability of finding a job in the next three months if respondent were to lose main/current job is based on the following question:
Suppose you were to lose your job this month. What do you think is the percent chance that within the following 3 months, you will find a job that you will accept, considering the pay and type of work? *Please enter your response in the box below, where 0% means "Absolutely no chance" and 100% means "Absolutely certain".*

Respondent's **wage growth over the past 12 months** $\mathrm{E}_t w_{t-12}$ is based on the following questions:
Over the last 12 months, do you think that your earnings in your (main) job have increased or decreased, before taxes and deductions?
Please choose one. Over the last 12 months, my earnings have:

- Increased by 0% or more
- Decreased by 0% or more

By about what percent do you think your earnings have increased/decreased in your (main) job, before taxes and deductions? Please give your best guess.
Please enter a number greater than 0 or equal to 0.
Over the last 12 months, the rate of increase/decrease in my earnings was ___ %

Expectations of wage growth 12 months from now $\mathrm{E}_t w_{t+12}$ are based on the following questions:
Please think ahead to 12 months from now. Suppose that you are working in the exact same (main) job at the same place you currently work, and working the exact same number of hours. What do you expect to have happened to your earnings on this job, before taxes and deductions?
Please choose one. Twelve months from now, I expect my earnings to have...

- Increased by 0% or more
- Decreased by 0% or more

By about what percent do you expect your earnings to have [increased/decreased]? Please give your best guess.
Please enter a number greater than 0 or equal to 0.
Twelve months from now, I expect my earnings to have [increased/decreased] by ___%

CSCE expectations about income and spending

Expectations for nominal income growth in the next 12 months are based on the following questions:
Next, we would like to ask you about your overall household income going forward. By household we mean everyone who usually lives in your primary residence (including yourself), excluding roommates and renters.

Over the next 12 months, what do you expect will happen to the total income of all members of your household (including you), from all sources, before taxes and deductions? Please choose one. Over the next 12 months, I expect my total household income to:

- increase by 0 percent or more
- decrease by 0 percent or more

By about what percent do you expect your total household income to [increase/decrease]? Please give your best guess. Please enter a number greater than 0 or equal to 0.

Twelve months from now, I expect my total household income to have [increased/decreased] by ___ percent.

Expectations for nominal spending growth in the next 12 months are based on the following questions:
Now think about your total household spending, including groceries, clothing, personal care, housing (such as rent, mortgage payments, utilities, maintenance, home improvements), transportation, recreation and entertainment, education, and any large items (such as home appliances, electronics, furniture or car payments).

Over the next 12 months, what do you expect will happen to the total spending of all members of your household (including you)? Please choose one. Over the next 12 months, I expect my total household spending to

- increase by 0 percent or more
- decrease by 0 percent or more

By about what percent do you expect your total household spending to [increase/decrease]? Please give your best guess. Please enter a number greater than 0 or equal to 0.

Over the next 12 months, I expect my total household spending to [increase/decrease] by ___ percent.

Actions in light of 2-year inflation expectations is based on the following question:
Which, if any, of the following actions are you taking, or planning to take, in light of your expectations of inflation/deflation over the 12-month period between [t+12 and t+24]?

Please select all that apply.

- Bring forward major purchases (such as furniture or appliances)
- Postpone major purchases
- Cut back spending and save more
- Shop around more for better value goods and services
- Push for increased pay with current employer
- Look to increase income in other ways (e.g. change jobs, take on second job, work more hours with current employer)
- Take no action

CSCE wage indexation

Is your pay adjusted to inflation?

- Yes, I have cost of living adjustment in my contract.
- Yes, my employer usually adjusts my pay to inflation, but I don't have cost of living adjustment in my contract.
- No, my pay is not adjusted to inflation.

Industry of employment

In which of the following industries is your [if working full-time or working part-time and Q3.2 =1: 'current'; If not working but would like to work: 'last'] job? Some examples are provided in brackets but are not exhaustive.

- Agriculture and forestry (eg. Farmer)
- Mining and oil and gas (eg. Miner)
- Utilities (eg. Hydro power worker)

- Construction (eg. Construction worker)
- Manufacturing (eg. Auto plant worker)
- Retail and wholesale trade (eg. Sales person)
- Transportation and warehousing (eg. Driver)
- Finance, insurance, real estate, rental and leasing (eg. Real estate agent)
- Public sector: Education, health and public administration (eg. Teacher)
- Information, culture and recreation (eg. Artists, performers)
- Others (eg. Cook)

B Appendix tables

Table B1: Estimation results for regressions with wage growth expectations for the public and private sectors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Panel A: Public sector					
$E_{i,t}wage_{i,t-12}$	0.121***	0.120***	0.120***	0.118***	0.119***	0.118***	0.112**	0.111**	0.125*	0.124*
	(0.040)	(0.040)	(0.041)	(0.041)	(0.040)	(0.040)	(0.046)	(0.046)	(0.064)	(0.065)
$E_{i,t}\pi_{t+12}$	0.131**		0.132**		0.135**		0.113**		0.151	
	(0.061)		(0.061)		(0.061)		(0.051)		(0.112)	
$E_{i,t}\pi_{t-12}$		0.119**		0.124**		0.124**		0.131**		0.109
		(0.060)		(0.060)		(0.060)		(0.054)		(0.112)
π_{t-1}^{prov}	-1.564***	-1.592***	-1.502***	-1.532***	-1.489***	-1.521***	-0.548	-0.572	-2.487***	-2.552***
	(0.504)	(0.501)	(0.510)	(0.509)	(0.503)	(0.503)	(0.525)	(0.525)	(0.754)	(0.754)
UR_t^{prov}	0.292	0.276								
	(0.212)	(0.215)								
Prob. UR higher							-0.006	-0.006		
							(0.009)	(0.009)		
Prob. UR lower									0.021*	0.020*
									(0.011)	(0.011)
Prob. of losing a job			-0.013	-0.014						
			(0.010)	(0.010)						
Prob. of finding a job					0.018***	0.018***				
					(0.005)	(0.005)				
Observations	3,027	3,027	3,027	3,027	3,027	3,027	1,494	1,494	1,533	1,533
Adjusted R-squared	0.060	0.059	0.061	0.060	0.064	0.063	0.056	0.057	0.074	0.072

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Panel B: Private sector					
$E_{i,t}wage_{i,t-12}$	0.215***	0.216***	0.210***	0.211***	0.208***	0.209***	0.199***	0.198***	0.222***	0.224***
	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)	(0.041)	(0.041)	(0.035)	(0.035)
$E_{i,t}\pi_{t+12}$	0.180***		0.192***		0.178***		0.108**		0.265***	
	(0.034)		(0.034)		(0.035)		(0.051)		(0.048)	
$E_{i,t}\pi_{t-12}$		0.156***		0.170***		0.153***		0.137**		0.188***
		(0.031)		(0.030)		(0.032)		(0.054)		(0.040)
π_{t-1}^{prov}	0.835**	0.851**	0.822**	0.831**	0.769*	0.782*	1.150*	1.141*	0.539	0.591
	(0.405)	(0.403)	(0.399)	(0.396)	(0.409)	(0.406)	(0.674)	(0.681)	(0.523)	(0.514)
UR_t^{prov}	0.089	0.024								
	(0.210)	(0.206)								
Prob. UR higher							-0.029***	-0.029***		
							(0.008)	(0.008)		
Prob. UR lower									0.034***	0.033***
									(0.009)	(0.009)
Prob. of losing a job			-0.028***	-0.028***						
			(0.007)	(0.008)						
Prob. of finding a job					0.027***	0.026***				
					(0.005)	(0.005)				
Observations	8,290	8,289	8,288	8,287	8,290	8,289	4,136	4,137	4,152	4,150
Adjusted R-squared	0.091	0.090	0.095	0.093	0.097	0.095	0.091	0.092	0.101	0.095

Notes: The estimation results for (2) are presented for respondents working in the public and private sectors, respectively. Different columns use different labour market indicators. Column (1) includes inflation expectations while column (2) includes inflation perceptions. All of the columns include controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B2: Estimation results for regressions with inflation expectations, testing for non-linearity of COVID-19 effects

	(1)	(2)	(3)	(4)	(5)
Panel A: Provincial unemployment rate (Full sample)					
$E_{i,t}\pi_{t-12}$			0.758***	0.748***	0.749***
			(0.011)	(0.012)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.389***	-0.003	-0.020	-0.020	-0.033
	(0.048)	(0.059)	(0.042)	(0.042)	(0.057)
UR_t^{prov}	0.074**	-0.124**	-0.002	-0.010	-0.089*
	(0.029)	(0.050)	(0.036)	(0.036)	(0.052)
PostCovid	1.313***				
	(0.469)				
PostCovid#UR_t^{prov}	-0.093*	0.085*	0.016	0.013	0.056
	(0.052)	(0.050)	(0.033)	(0.033)	(0.049)
Observations	40,086	38,961	40,078	38,953	22,786
Adjusted R-squared	0.021	0.060	0.588	0.589	0.592
Panel B: Prob UR Higher					
$E_{i,t}\pi_{t-12}$			0.764***	0.756***	0.760***
			(0.014)	(0.014)	(0.019)
$E_{i,t}\text{wage}_{i,t+12}$					0.002
					(0.003)
π_{t-1}^{prov}	0.476***	0.079	0.005	0.013	0.046
	(0.045)	(0.084)	(0.058)	(0.058)	(0.082)
Prob. UR higher	0.016***	0.015***	0.007***	0.007***	0.007***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
PostCovid	-0.024				
	(0.163)				
PostCovid#Prob. UR higher	0.015***	0.013***	0.006**	0.006**	0.009**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Observations	20,022	19,466	20,019	19,463	11,364
Adjusted R-squared	0.038	0.075	0.597	0.597	0.600

	Continuation of Table				
	(1)	(2)	(3)	(4)	(5)
	Panel C: Prob UR Lower				
$E_{i,t}\pi_{t-12}$			0.745***	0.735***	0.733***
			(0.014)	(0.015)	(0.020)
$E_{i,t}\text{wage}_{i,t+12}$					0.018***
					(0.004)
π_{t-1}^{prov}	0.368***	-0.047	-0.037	-0.042	-0.076
	(0.044)	(0.077)	(0.054)	(0.055)	(0.076)
Prob. UR lower	-0.008***	-0.008***	-0.005***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)
PostCovid	1.223***				
	(0.188)				
PostCovid#Prob. UR lower	-0.010***	-0.007**	-0.002	-0.002	-0.002
	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
Observations	20,058	19,489	20,053	19,484	11,419
Adjusted R-squared	0.022	0.062	0.583	0.585	0.589
	Panel D: Provincial unemployment rate (LF==1)				
$E_{i,t}\pi_{t-12}$			0.762***	0.755***	0.749***
			(0.014)	(0.015)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.425***	-0.041	-0.057	-0.054	-0.033
	(0.057)	(0.080)	(0.051)	(0.051)	(0.057)
UR_t^{prov}	0.043	-0.188***	-0.061	-0.075	-0.089*
	(0.036)	(0.064)	(0.047)	(0.047)	(0.052)
PostCovid	0.760				
	(0.523)				
PostCovid#UR_t^{prov}	-0.023	0.203***	0.073*	0.073	0.056
	(0.060)	(0.067)	(0.044)	(0.045)	(0.049)
Observations	25,394	24,703	25,387	24,696	22,785
Adjusted R-squared	0.020	0.056	0.591	0.593	0.592

Continuation of Table

	(1)	(2)	(3)	(4)	(5)
Panel E: Prob UR Higher (LF==1)					
$E_{i,t}\pi_{t-12}$			0.763***	0.759***	0.760***
			(0.017)	(0.018)	(0.019)
$E_{i,t}\text{wage}_{i,t+12}$					0.002
					(0.003)
π_{t-1}^{prov}	0.478***	0.065	0.026	0.033	0.046
	(0.060)	(0.102)	(0.075)	(0.075)	(0.082)
Prob. UR higher	0.014***	0.014***	0.008***	0.007***	0.007***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
PostCovid	-0.388**				
	(0.193)				
PostCovid#Prob. UR higher	0.023***	0.021***	0.008**	0.008**	0.009**
	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)
Observations	12,692	12,353	12,690	12,351	11,363
Adjusted R-squared	0.039	0.069	0.597	0.598	0.600
Panel F: Prob UR Lower (LF==1)					
$E_{i,t}\pi_{t-12}$			0.756***	0.747***	0.733***
			(0.019)	(0.019)	(0.020)
$E_{i,t}\text{wage}_{i,t+12}$					0.018***
					(0.004)
π_{t-1}^{prov}	0.393***	-0.087	-0.113*	-0.115*	-0.076
	(0.051)	(0.115)	(0.067)	(0.067)	(0.076)
Prob. UR lower	-0.009***	-0.007***	-0.006***	-0.005***	-0.005***
	(0.003)	(0.003)	(0.001)	(0.001)	(0.002)
PostCovid	1.021***				
	(0.223)				
PostCovid#Prob. UR lower	-0.008*	-0.005	-0.001	-0.001	-0.002
	(0.004)	(0.004)	(0.003)	(0.003)	(0.002)
Observations	12,699	12,347	12,694	12,342	11,419
Adjusted R-squared	0.020	0.059	0.589	0.593	0.589

	Continuation of Table				
	(1)	(2)	(3)	(4)	(5)
Panel G: Prob of finding a job					
$E_{i,t}\pi_{t-12}$			0.758***	0.751***	0.749***
			(0.015)	(0.015)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.422***	0.032	-0.021	-0.021	-0.023
	(0.050)	(0.085)	(0.058)	(0.057)	(0.058)
Prob. of finding a job	-0.002**	-0.001	-0.001*	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
PostCovid	0.429***				
	(0.159)				
PostCovid#Prob. of finding a job	0.005*	0.004	0.002	0.001	0.001
	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
Observations	23,438	22,794	23,431	22,787	22,782
Adjusted R-squared	0.022	0.058	0.589	0.592	0.592
Panel H: Prob of losing a job					
$E_{i,t}\pi_{t-12}$			0.756***	0.749***	0.747***
			(0.015)	(0.015)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$ 0.010***					
					(0.003)
π_{t-1}^{prov}	0.421***	0.041	-0.019	-0.019	-0.021
	(0.049)	(0.084)	(0.057)	(0.057)	(0.057)
Prob. of losing a job	0.017***	0.016***	0.004***	0.004***	0.004***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
PostCovid	0.445***				
	(0.136)				
PostCovid#Prob. of finding a job	0.005	0.005	0.001	0.001	0.001
	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)
Observations	23,432	22,788	23,425	22,781	22,776
Adjusted R-squared	0.031	0.065	0.590	0.592	0.592

Continuation of Table

	(1)	(2)	(3)	(4)	(5)
Panel I: Unemployed dummy					
$E_{i,t}\pi_{t-12}$			0.762***	0.755***	0.749***
			(0.014)	(0.015)	(0.015)
$E_{i,t}\text{wage}_{i,t+12}$					0.009***
					(0.003)
π_{t-1}^{prov}	0.409***	-0.018	-0.048	-0.046	-0.023
	(0.049)	(0.081)	(0.051)	(0.051)	(0.058)
unemployed dummy	0.975***	0.570***	0.414***	0.318**	
	(0.200)	(0.206)	(0.122)	(0.129)	
PostCovid	0.663***				
	(0.113)				
PostCovid#unemployed dummy	-0.136	-0.203	-0.026	-0.084	
	(0.304)	(0.316)	(0.227)	(0.229)	
Observations	25,394	24,703	25,387	24,696	22,785
Adjusted R-squared	0.022	0.056	0.591	0.593	0.592

Notes: The estimation results for equation (1) are presented for several specifications. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is perceptions about inflation + province and date. Column (4) is Column (3) + perceptions of inflation. Column (5) is Column (4) + wage growth expectations. All specifications include a PostCovid dummy variable as well as an interaction term of the dummy variable with the labour market measure. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B3: Estimation results for regressions with wage growth expectations, testing for non-linearity of COVID-19 effects

	(1)	(2)	(3)	(4)	(5)
Panel A: Provincial unemployment rate					
$E_{i,t}wage_{i,t-12}$			0.222***	0.212***	0.210***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.180***
					(0.022)
π_{t-1}^{prov}	0.422***	0.075	-0.073	-0.060	-0.051
	(0.115)	(0.196)	(0.188)	(0.190)	(0.191)
UR_t^{prov}	-0.132	-0.351**	-0.209	-0.228	-0.185
	(0.088)	(0.144)	(0.159)	(0.163)	(0.161)
PostCovid	-0.455				
	(0.885)				
PostCovid#UR_t^{prov}	0.039	0.469***	0.401**	0.404**	0.364**
	(0.113)	(0.170)	(0.162)	(0.167)	(0.167)
Observations	23,450	22,805	22,903	22,263	22,253
Adjusted R-squared	0.004	0.018	0.079	0.083	0.089
Panel B: Prob UR Higher					
$E_{i,t}wage_{i,t-12}$			0.236***	0.228***	0.225***
			(0.029)	(0.030)	(0.030)
$E_{i,t}\pi_{t+12}$					0.149***
					(0.033)
π_{t-1}^{prov}	0.630***	0.156	-0.101	-0.054	-0.064
	(0.132)	(0.288)	(0.284)	(0.285)	(0.289)
Prob. UR higher	-0.017**	-0.018**	-0.006	-0.007	-0.009
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)
PostCovid	-0.968				
	(0.647)				
PostCovid#Prob. UR higher	0.018	0.015	0.006	0.005	0.002
	(0.014)	(0.013)	(0.011)	(0.011)	(0.011)
Observations	11,691	11,372	11,419	11,102	11,097
Adjusted R-squared	0.006	0.024	0.091	0.097	0.100

	Continuation of Table				
	(1)	(2)	(3)	(4)	(5)
	Panel C: Prob UR Lower				
$E_{i,t}wage_{i,t-12}$			0.203***	0.193***	0.191***
			(0.025)	(0.025)	(0.025)
$E_{i,t}\pi_{t+12}$					0.221***
					(0.030)
π_{t-1}^{prov}	0.352***	0.062	0.037	-0.024	-0.008
	(0.092)	(0.247)	(0.259)	(0.261)	(0.260)
Prob. UR lower	0.040***	0.034***	0.037***	0.033***	0.035***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
PostCovid	-0.965**				
	(0.438)				
PostCovid#Prob. UR lower	-0.003	0.003	-0.007	-0.002	-0.001
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Observations	11,756	11,430	11,481	11,158	11,153
Adjusted R-squared	0.010	0.022	0.074	0.077	0.085
	Panel D: Prob of finding a job				
$E_{i,t}wage_{i,t-12}$			0.215***	0.207***	0.204***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.181***
					(0.022)
π_{t-1}^{prov}	0.455***	0.081	-0.052	-0.045	-0.041
	(0.096)	(0.191)	(0.183)	(0.186)	(0.187)
Prob. of finding a job	0.038***	0.035***	0.030***	0.028***	0.028***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
PostCovid	-0.071				
	(0.335)				
PostCovid#Prob. of finding a job	-0.003	-0.003	-0.003	-0.003	-0.004
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)
Observations	23,447	22,802	22,900	22,260	22,250
Adjusted R-squared	0.016	0.028	0.086	0.089	0.095

	Continuation of Table				
	(1)	(2)	(3)	(4)	(5)
	Panel E: Prob of losing a job				
$E_{i,t}wage_{i,t-12}$			0.220***	0.209***	0.207***
			(0.022)	(0.022)	(0.022)
$E_{i,t}\pi_{t+12}$					0.189***
					(0.023)
π_{t-1}^{prov}	0.509***	0.129	-0.015	-0.011	-0.010
	(0.096)	(0.191)	(0.182)	(0.185)	(0.186)
Prob. of losing a job	-0.035***	-0.038***	-0.025***	-0.027***	-0.030***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
PostCovid	-1.182***				
	(0.239)				
PostCovid#Prob. of losing a job	0.041***	0.037***	0.033***	0.031***	0.030***
	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)
Observations	23,441	22,796	22,895	22,255	22,245
Adjusted R-squared	0.007	0.022	0.080	0.085	0.091

Notes: The estimation results for equation (2) are presented for several specifications. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is perceptions about inflation + province and date. Column (4) is Column (3) + perceptions of inflation. Column (5) is Column (4) + inflation expectations. All specifications include a PostCovid dummy variable as well as an interaction term of the dummy variable with the labour market measure. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B4: Estimation results for regressions with spending expectations and inflation expectations, testing for non-linearity of COVID-19 effects

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Provincial unemployment rate (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.784***	-0.793***	-0.512***			
	(0.028)	(0.029)	(0.030)			
$E_{i,t}\pi_{t-12}$				-0.600***	-0.607***	-0.380***
				-0.03	(0.031)	(0.027)
$E_{i,t}$income$_{t+12}$			0.313***			0.332***
			(0.012)			(0.012)
UR_t^{prov}	-0.523***	-0.012	0.024	-0.495***	-0.024	0.022
	(0.084)	(0.130)	(0.114)	(0.076)	(0.130)	(0.112)
PostCovid	1.660***			1.085***		
	(0.386)			(0.369)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.037	-0.022	-0.005			
	(0.046)	(0.043)	(0.040)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.076	0.021	0.032
				(0.053)	(0.051)	(0.043)
Observations	36,343	35,333	33,018	36,337	35,327	33,012
Adjusted R-squared	0.084	0.099	0.242	0.048	0.062	0.227
Panel B: Prob UR higher (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.746***	-0.765***	-0.514***			
	(0.041)	(0.042)	(0.042)			
$E_{i,t}\pi_{t-12}$				-0.593***	-0.609***	-0.411***
				(0.046)	(0.049)	(0.044)
$E_{i,t}$income$_{t+12}$			0.303***			0.321***
			(0.015)			(0.015)
Prob. UR higher	-0.005	-0.004	0.006*	-0.011**	-0.010**	0.003
	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
PostCovid	0.825*			0.169		
	(0.435)			(0.397)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.057	-0.036	-0.006			
	(0.066)	(0.065)	(0.061)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.135*	0.052	0.066
				(0.074)	(0.074)	(0.066)
Observations	18,159	17,656	16,473	18,156	17,653	16,470
Adjusted R-squared	0.075	0.098	0.241	0.042	0.062	0.227

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Prob UR lower (Full sample)						
$E_{i,t}\pi_{t+12}$	-0.815***	-0.819***	-0.513***			
	(0.039)	(0.041)	(0.038)			
$E_{i,t}\pi_{t-12}$				-0.600***	-0.600***	-0.349***
				(0.040)	(0.042)	(0.033)
$E_{i,t}$income$_{t+12}$			0.324***			0.343***
			(0.018)			(0.017)
Prob. UR lower	0.024***	0.017***	0.005	0.028***	0.021***	0.007
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
PostCovid	-0.269			-0.684*		
	(0.367)			(0.349)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.083	-0.005	-0.011			
	(0.060)	(0.055)	(0.050)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.090	-0.000	-0.001
				(0.065)	(0.060)	(0.049)
Observations	18,179	17,672	16,541	18,176	17,669	16,538
Adjusted R-squared	0.086	0.103	0.244	0.048	0.065	0.228
Panel D: Prob of finding a job (LF=1)						
$E_{i,t}\pi_{t+12}$	-0.747***	-0.755***	-0.481***			
	(0.030)	(0.029)	(0.033)			
$E_{i,t}\pi_{t-12}$				-0.547***	-0.552***	-0.340***
				(0.032)	(0.032)	(0.031)
$E_{i,t}$income$_{t+12}$			0.320***			0.343***
			(0.016)			(0.016)
Prob. of finding a job	0.013***	0.006**	-0.007***	0.013***	0.007**	-0.008***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
PostCovid	0.203			-0.331		
	(0.339)			(0.288)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.067	-0.012	-0.029			
	(0.053)	(0.049)	(0.046)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.117**	0.045	0.019
				(0.057)	(0.052)	(0.046)
Observations	21,025	20,456	19,276	21,020	20,451	19,271
Adjusted R-squared	0.083	0.102	0.237	0.042	0.059	0.220

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Prob of losing a job (LF=1)						
$E_{i,t}\pi_{t+12}$	-0.745***	-0.751***	-0.485***			
	(0.029)	(0.029)	(0.032)			
$E_{i,t}\pi_{t-12}$				-0.541***	-0.546***	-0.343***
				(0.032)	(0.032)	(0.031)
$E_{i,t}$income$_{t+12}$			0.320***			0.342***
			(0.016)			(0.016)
Prob. of losing a job	-0.007	-0.010**	0.007*	-0.011**	-0.014***	0.006
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
PostCovid	0.156			-0.350		
	(0.341)			(0.290)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.070	-0.010	-0.031			
	(0.054)	(0.049)	(0.046)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.121**	0.047	0.018
				(0.057)	(0.051)	(0.046)
Observations	21,021	20,452	19,274	21,016	20,447	19,269
Adjusted R-squared	0.082	0.102	0.237	0.041	0.060	0.219
Panel F: Unemployed dummy (LF=1)						
$E_{i,t}\pi_{t+12}$	-0.767***	-0.773***	-0.489***			
	(0.029)	(0.029)	(0.033)			
$E_{i,t}\pi_{t-12}$				-0.556***	-0.562***	-0.345***
				(0.033)	(0.035)	(0.033)
$E_{i,t}$income$_{t+12}$			0.310***			0.330***
			(0.014)			(0.014)
unemployed dummy	0.672	0.793	-1.362**	0.356	0.580	-1.643**
	(0.738)	(0.733)	(0.674)	(0.765)	(0.764)	(0.687)
PostCovid	0.186			-0.328		
	(0.386)			(0.346)		
PostCovid#$E_{i,t}\pi_{t+12}$	0.040	-0.052	-0.061			
	(0.056)	(0.050)	(0.045)			
PostCovid#$E_{i,t}\pi_{t-12}$				0.081	-0.005	-0.009
				(0.063)	(0.056)	(0.049)
Observations	22,821	22,211	20,941	22,816	22,206	20,936
Adjusted R-squared	0.079	0.102	0.246	0.039	0.061	0.229

Notes: The estimation results for equation (3) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that wage growth perceptions are used instead of wage growth expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. All specifications include a PostCovid dummy variable as well as an interaction term of the dummy variable with the inflation measure. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B5: Estimation results for regressions with spending expectations and wage growth expectations, testing for non-linearity of COVID-19 effects

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Provincial unemployment rate (Full sample)						
$E_{i,t}wage_{i,t+12}$	0.180***	0.177***	-0.009			
	(0.018)	(0.019)	(0.021)			
$E_{i,t}wage_{i,t-12}$				0.115***	0.105***	0.042***
				(0.014)	(0.015)	(0.014)
$E_{i,t}income_{t+12}$			0.356***			0.359***
			(0.018)			(0.016)
UR_t^{prov}	-0.237***	-0.047	0.008	-0.240***	0.121	0.162
	(0.058)	(0.174)	(0.150)	(0.060)	(0.156)	(0.140)
PostCovid	-0.061			0.281		
	(0.249)			(0.267)		
PostCovid#$E_{i,t}wage_{i,t+12}$	0.078**	0.073**	0.076**			
	(0.033)	(0.033)	(0.029)			
PostCovid#$E_{i,t}wage_{i,t-12}$				0.004	0.001	-0.010
				(0.027)	(0.027)	(0.022)
Observations	21,027	20,458	19,278	20,529	19,964	18,805
Adjusted R-squared	0.042	0.053	0.204	0.020	0.030	0.209
Panel B: Prob UR higher (Full sample)						
$E_{i,t}wage_{i,t+12}$	0.183***	0.173***	-0.032			
	(0.019)	(0.020)	(0.020)			
$E_{i,t}wage_{i,t-12}$				0.111***	0.097***	0.042**
				(0.017)	(0.017)	(0.017)
$E_{i,t}income_{t+12}$			0.372***			0.369***
			(0.024)			(0.022)
Prob. UR higher	-0.014***	-0.016***	0.003	-0.016***	-0.017***	0.003
	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
PostCovid	-0.239			0.196		
	(0.302)			(0.292)		
PostCovid#$E_{i,t}wage_{i,t+12}$	0.077*	0.074*	0.100***			
	(0.040)	(0.040)	(0.032)			
PostCovid#$E_{i,t}wage_{i,t-12}$				0.002	-0.000	-0.021
				(0.036)	(0.037)	(0.033)
Observations	10,489	10,210	9,618	10,243	9,965	9,382
Adjusted R-squared	0.045	0.054	0.225	0.019	0.028	0.229

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Prob UR lower (Full sample)						
$E_{i,t}wage_{i,t+12}$	0.173***	0.175***	0.012			
	(0.033)	(0.033)	(0.035)			
$E_{i,t}wage_{i,t-12}$				0.117***	0.109***	0.040*
				(0.024)	(0.024)	(0.023)
$E_{i,t}income_{t+12}$			0.339***			0.347***
			(0.023)			(0.022)
Prob. UR lower	0.027***	0.021***	0.012**	0.032***	0.027***	0.012**
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
PostCovid	-1.116***			-0.931***		
	(0.308)			(0.314)		
PostCovid#$E_{i,t}wage_{i,t+12}$	0.084*	0.076*	0.055			
	(0.047)	(0.046)	(0.045)			
PostCovid#$E_{i,t}wage_{i,t-12}$				0.011	0.006	0.002
				(0.033)	(0.033)	(0.028)
Observations	10,535	10,245	9,658	10,283	9,996	9,421
Adjusted R-squared	0.041	0.058	0.188	0.024	0.039	0.192
Panel D: Prob of finding a job (LF=1)						
$E_{i,t}wage_{i,t+12}$	0.179***	0.177***	-0.007			
	(0.018)	(0.018)	(0.021)			
$E_{i,t}wage_{i,t-12}$				0.114***	0.104***	0.044***
				(0.014)	(0.015)	(0.014)
$E_{i,t}income_{t+12}$			0.358***			0.362***
			(0.018)			(0.016)
Prob. of finding a job	0.005*	-0.000	-0.010***	0.008***	0.003	-0.010***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
PostCovid	-0.520**			-0.163		
	(0.246)			(0.253)		
PostCovid#$E_{i,t}wage_{i,t+12}$	0.081**	0.073**	0.075**			
	(0.033)	(0.033)	(0.030)			
PostCovid#$E_{i,t}wage_{i,t-12}$				0.007	0.001	-0.011
				(0.027)	(0.027)	(0.022)
Observations	21,023	20,454	19,274	20,525	19,960	18,801
Adjusted R-squared	0.041	0.053	0.205	0.019	0.031	0.210

Continuation of Table

	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Prob of losing a job (LF=1)						
$E_{i,t}$wage$_{i,t+12}$	0.178***	0.173***	-0.009			
	(0.018)	(0.019)	(0.021)			
$E_{i,t}$wage$_{i,t-12}$				0.114***	0.102***	0.042***
				(0.014)	(0.015)	(0.014)
$E_{i,t}$income$_{t+12}$			0.356***			0.360***
			(0.018)			(0.016)
Prob. of losing a job	-0.018***	-0.019***	0.000	-0.016***	-0.018***	0.004
	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)
PostCovid	-0.448*			-0.114		
	(0.246)			(0.254)		
PostCovid#$E_{i,t}$wage$_{i,t+12}$	0.084**	0.077**	0.076**			
	(0.033)	(0.032)	(0.030)			
PostCovid#$E_{i,t}$wage$_{i,t-12}$				0.008	0.003	-0.011
				(0.027)	(0.027)	(0.022)
Observations	21,019	20,450	19,272	20,522	19,957	18,800
Adjusted R-squared	0.042	0.055	0.204	0.020	0.032	0.209

Notes: The estimation results for equation (3) are presented for several specifications. Columns (4) to (6) are analogous to (1) to (3) except that wage growth perceptions are used instead of wage growth expectations. Column (1) includes no controls. Column (2) includes controls for demographic characteristics (age, gender, income, marital status, presence of children), province and date. Column (3) is (2) + expectations about real income growth. All specifications include a PostCovid dummy variable as well as an interaction term of the dummy variable with the wage growth measure. Standard errors, adjusted for clustering at the time-province level, are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.