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## Economic Letter

# **A snapshot into inflation and earnings expectations by Irish residents**

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# A snapshot into inflation and earnings expectations by Irish residents

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A survey of Irish residents shows that inflation expectations one-year ahead increased sharply in recent months and have remained elevated. At the same time, Irish workers do not appear to expect their earnings to grow at a similar pace over the next year. As a result, workers expect their real earnings to decline on average.

## 1. Introduction

Annual inflation in Ireland averaged 6.2% in the first four months of this year, and was 7.3% in April. In their March Bulletin, the Central Bank of Ireland (CBI) projected inflation to be 6.5% overall this year (CBI, 2022). In comparison, inflation in 2021 was 2.4%. These elevated inflation rates are due to several factors: re-opening of the economy after the pandemic restrictions (Furman, 2022), supply chain disruptions (Akinci et al., 2022), the impact of the Russia-Ukraine war (Afunts et al., 2022), and very high increases in energy costs (Schnabel, 2022).<sup>3</sup> Understanding whether these fluctuations are temporary or permanent has been a priority for academics and policymakers.<sup>4</sup> Meanwhile, the labour market conditions in Ireland remain robust with employment growing strongly (CBI, 2022).

Therefore, a key upside risk to the inflation outlook is the potential for second-round effects (Elderson, 2022; de Guindos, 2022). Household inflation expectations one-year ahead have increased sharply over the course of last year and continued to increase this year (Lane, 2022). If the recent increases in inflation are perceived to be persistent,<sup>5</sup> we can expect stronger wage demands that may then translate into higher wage growth. This, in turn, can lead to accelerating consumer prices, as firms may choose to raise prices to offset any increases in wages. Recent input cost increases for Irish businesses are expected to contribute to inflation remaining above pre-pandemic levels for the foreseeable future (Byrne et al., 2022). The

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<sup>3</sup> The inflation dynamics in the euro area differ substantially from the US, where there is also an important fiscal aspect to the recent inflation bout (Jorda et al., 2022).

<sup>4</sup> E.g. Borio, 2022; Eo et al., 2022.

<sup>5</sup> To date, shocks related to the Covid pandemic and the Russia-Ukraine war have predominantly affected the short-term inflation expectations (Armantier et al., 2021). However, if these shocks do not dissipate quickly enough, long-term expectations may adjust to a greater extent. Schnabel (2022) shows that the three year ahead median expectations have increased recently.

concern among policymakers is that economy develops a wage-price spiral as previously witnessed in the 1970s ([BIS, 2022](#)).

Survey expectations about the economy can provide monetary policymakers with useful insights regarding these developments ([Cœuré, 2019](#); [Coibion et al., 2020](#)). Survey data is especially relevant in the current high inflation environment, since actual data is only available with lags ([Powell and Wessel, 2020](#)).

Consequently, this letter aims to shed light on the expectations of Irish households for future inflation and their future earnings. Subjective quantitative household expectations, while typically biased, are nevertheless useful to understand how people think and make economic decisions (see [Weber et al. \(2022\)](#) for a detailed discussion). Additionally, we complement this information with qualitative expectations, which are likely less biased.

We show evidence that inflation expectations one-year ahead increased sharply in recent months and have remained elevated. Moreover, Irish workers do not appear to expect their earnings to grow at a similar pace over the next year. As a result, workers expect their real earnings to decline on average. Our work adds to existing surveys by jointly examining expectations about earnings and inflation, shedding light on developments in expected real earnings, and potential second round effects.

In section 2, we describe how the data is collected and how the survey is carried out. Section 3 examines the key questions, and Section 4 discusses additional results. The final section concludes.

## 2. Data

The data for this analysis was collected in collaboration with Ireland Thinks. Ireland Thinks conducts public opinion polls on a nationally representative sample.<sup>6</sup> During monthly polls, the algorithm chooses 5,000 individuals to take part on the basis of their demographics and other characteristics.

We added a set of questions to the survey that focus on price and earnings expectations to the regular polls in February, March and April of this year.<sup>7</sup> Overall, 1593 respondents participated in February, 1293 in March and 1418 in April.<sup>8</sup>

Table A1 in the Appendix summarises the main socio-demographic characteristics of the respondents. The careful build-up of respondents in the sample offers a representative population for the Irish society.

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<sup>6</sup> A panel of around 25,000 people has been built using random digit dialling, and is continually updated.

<sup>7</sup> February 5<sup>th</sup> to 8<sup>th</sup>, March 4<sup>th</sup> to 8<sup>th</sup>, and April 1<sup>st</sup> to 4<sup>th</sup>.

<sup>8</sup> For some questions the number of responses may be smaller due to non-response, or a question not being applicable to all respondents. The number of questions added varies across the months.

However, in some cases, the sample may slightly differ from the population (e.g. the share of older respondents is relatively large). We therefore report the results using weighted data, i.e., data is adjusted to be more representative of the Irish population. However, the results are very similar when unadjusted data is used.<sup>9</sup>

The two main questions are about future developments in consumer prices and earnings (in qualitative terms). Table A2 in the Appendix shows the exact formulation.<sup>10</sup> These offer us an insight into the inflation and earnings expectations. In our analysis, we only consider earnings expectations of employed respondents.

For these qualitative questions, it is useful to construct a summary measure. We follow the European Commission's approach, and calculate the balance statistic. The balance statistic is simply the difference between "positive" (increase) and "negative" (decrease) answers, giving more weight for extreme answer options (e.g. increase/decrease a lot), measured as percentage points of total answers.<sup>11</sup>

We also include quantitative questions regarding inflation and earnings growth in some months, see Q3 and Q4 in Table A2. The respondents who expected earnings to increase in the qualitative question were further asked how the expected growth in their earnings compares to expected inflation (see Q5 in Table A2). This provides information about the upper bound of earnings expectations.

Finally, we inquire whether the respondents had taken any actions to pursue a higher wage at their current job in order to compensate for changes in the cost of living (Q6 in Table A2).

## 3. Main findings

### 3.1 Inflation expectations

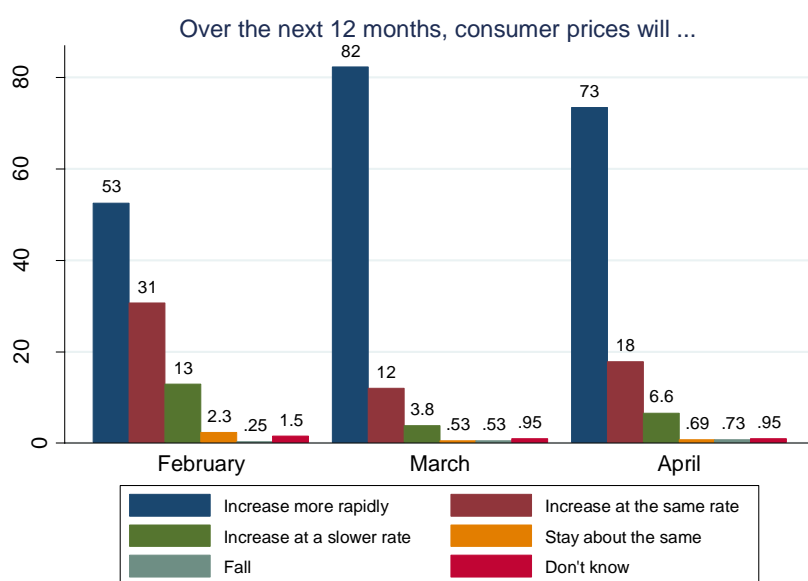
In February, the majority of respondents (83%) expected prices to either increase more rapidly or at the same rate over the next year. Qualitative inflation expectations have increased sharply since, as shown in Figure 1. Moreover, the balance statistic increased from 66.4 in February to 81.1 in April.<sup>12</sup>

<sup>9</sup> These weights are based on the respondent's age, gender, education, income, employment status and employment sector.

<sup>10</sup> The question about consumer prices resembles the consumer survey by the European Commission. The question about earnings is very similar to the question in the Survey of Consumer Expectations by the Federal Reserve Bank of New York.

<sup>11</sup> The precise formula is:  $BS = (PP + \frac{1}{2}P) - (\frac{1}{2}M + MM)$ , where P and PP stand for "positive" and "very positive", M and MM denote "negative" and "very negative", respectively. Balance values range from -100, when all respondents choose the most negative option (--), to +100, when all respondents choose the most positive option (++)

<sup>12</sup> According to the European Commission survey, the balance statistic increased from 35 in February to 53.1 in April. This survey is telephoned-based as opposed online-based as Ireland Thinks survey. This may explain the level difference.

**Figure 1. Qualitative inflation expectations**

Notes: this figure shows responses to the qualitative question about consumer price trends over the next 12 months compared to the previous 12 months. Percent share of total responses (weighted). Based on 1593, 1281 and 1409 responses in February, March and April, respectively.

Survey participants were also asked to forecast numerically what they expect inflation to be. Respondents expected average inflation over the next year to be 9% and 10% in March and April, respectively.<sup>13</sup> The median response, which is less affected by large outliers, also increased from 7% to 8%. This compares to 6.3% average and 5% median expected inflation reported in January. Our survey results also show that generally women<sup>14</sup>, lower income, less educated and older individuals have higher inflation expectations, in line with other studies ([Fritzer and Rumler, 2015](#); [Arioli et al., 2017](#)).

The recent uptick in inflation expectations is not surprising given the close link between the news about inflation and inflation expectations ([Garcia and Werner, 2021](#)). Recently, there have been a lot of references to [high inflation](#) and concerns about increasing [costs of living](#) in the Irish media. Particularly, prices for frequently purchased items, such as [food and energy](#), are salient for households and may also take up a relatively large share within the consumption basket ([D'Acunto et al., 2020](#)).

One of the regular survey questions also highlighted a growing concern about living costs among Irish consumers. Almost 63% of respondents

<sup>13</sup> We discard observations that exceed 100%. When a respondent indicates that prices will stay the same, a 0% inflation rate is assumed. We also discard observations for respondents who indicate that prices would fall but give a positive inflation figure. These adjustments only affect a very small share of observations.

<sup>14</sup> Traditional gender roles expose women and men to different economic signals, which affect their expectations ([D'Acunto et al., 2020](#))

mentioned the cost of living as one of the two most important issues that Ireland faces, up from 57.8% in February.

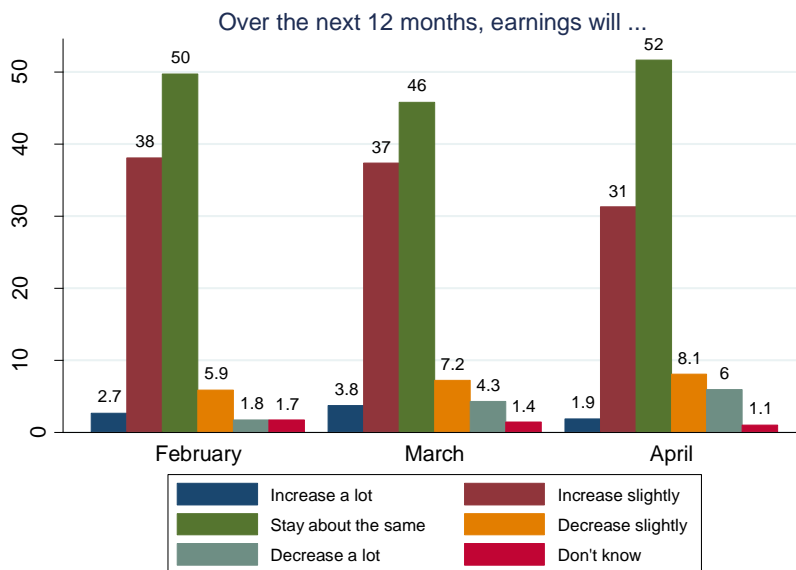
### 3.2 Earnings expectations

#### Nominal earnings expectations

Figure 2 shows the qualitative earnings expectations over the next twelve months. Approximately half of the respondents who work expected their earnings to stay the same, and around a third expected earnings to increase slightly.

Earnings expectations declined somewhat, with the balance statistic going down to 7.6 in April from 17 in February. Fewer respondents expect earnings to increase. The muted earnings expectations coincide with the recent upswing in uncertainty and increased downside risks to economic activity.<sup>15</sup>

Figure 2. Qualitative earnings expectations



Notes: this figure shows responses to the qualitative question about earnings over the next 12 months of working respondents. Percent share of total responses (weighted). Based on 1018, 810 and 889 responses in February, March and April, respectively.

Earnings expectations vary across respondents. Figure 3 depicts the heterogeneity across gender, sector, and income. Women are generally less optimistic than men. While earnings expectations of male respondents also

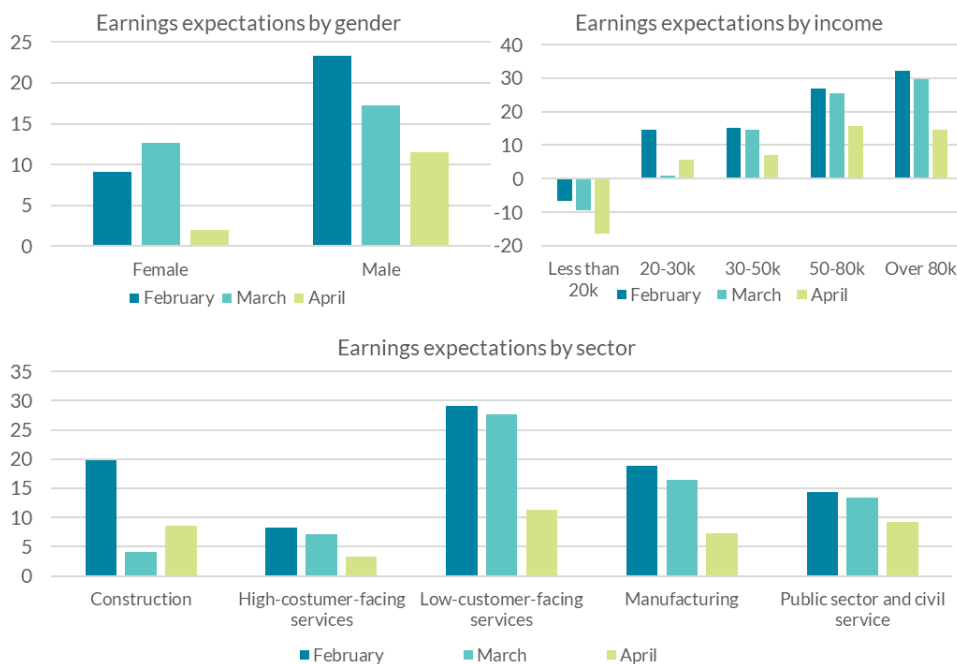
<sup>15</sup> [Kandoussi and Langot](#) (2020) show how uncertainty shocks significantly affect unemployment dynamics.

declined substantially since February, they remain higher than the expectations of women.<sup>16</sup>

Higher income respondents have higher earnings expectations. In the survey, higher deciles typically are employed in sectors which were comparatively less affected by the pandemic, and have seen strong wage increases. Since February, expectations declined across most income levels.

Across economic sectors, workers in the high-customer-facing services (e.g. shops, hotels and restaurants, transport, etc.) are more pessimistic and typically have the lowest earnings expectations. However, the recent decline in the overall sentiment about earnings appears to be driven by declining expectations in the construction, manufacturing and low-customer-facing services sectors.

**Figure 3. Heterogeneity in earnings expectations**



Notes: this figure shows the balance statistics for the qualitative question about earnings over the next 12 months of working respondents across different characteristics (weighted data). By gender: based on 1018, 810 and 889 responses in February, March and April, respectively. By sector: 963, 767, and 847 responses. By income: 925, 735 and 810.

Next, we analyse whether the differences in earnings expectations across the various types of respondents are statistically significant, while controlling for underlying characteristics. We estimate a logit regression model where the dependent variable is an indicator variable that takes the

<sup>16</sup> This could have multiple reasons. The pandemic had a [disparate gender impact](#) (Alon et al., 2021). While in Ireland most of the initial job losses were recovered, women have typically taken on the role as carer within the family. In comparison, men were impacted considerably less (Frederici, 2021). The difference in earnings expectations is also linked with the gender wage gap (Doorley et al. 2022).

value 1 if earnings are expected to increase and 0 otherwise. This offers some insight into which characteristics are associated with a higher probability of a respondent expecting their earnings to increase over the next 12 months. Table A3 in the Appendix summarises the results based on pooled data across all three months.

Men and respondents with higher income are significantly more likely to report expected increases in earnings relative to women and lower-income respondents. Respondents without a leaving certificate qualification are much less likely to expect higher earnings. The probability that a respondent expects earnings to increase is lower if they work in either the high-customer facing services or public sectors.

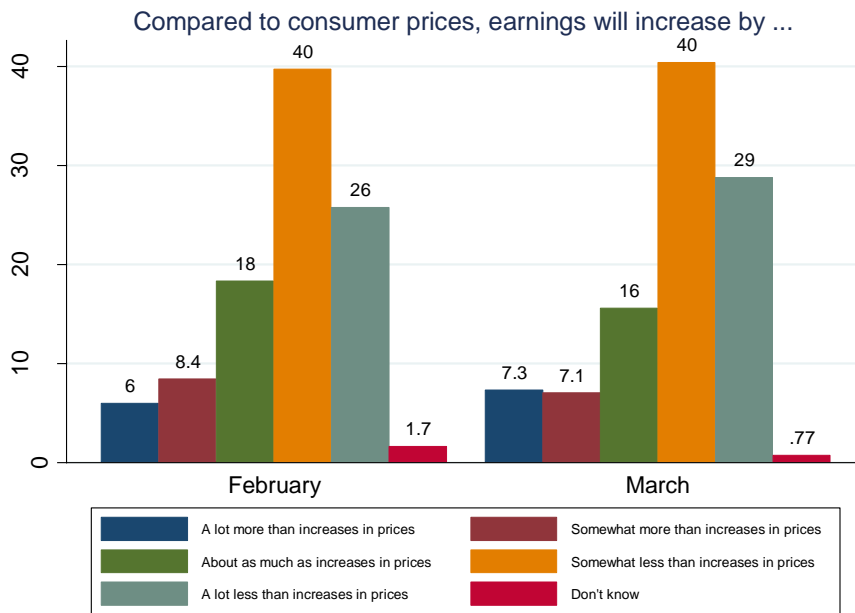
### *Real earnings expectations*

So far, we have seen that more respondents expect their earnings to increase rather than decline. At the same time, inflation expectations in quantitative terms are elevated. This raises the question whether Irish consumers think future increases in their earnings would keep up with expected increases in consumer prices.

Figure 4 shows that among those respondents who expect their earnings to increase, the vast majority expect their earnings to increase by less than consumer prices. Thus, on balance Irish workers think their real earnings will fall. This is reflected in the negative balance statistic.



**Figure 4. Real earnings expectations**



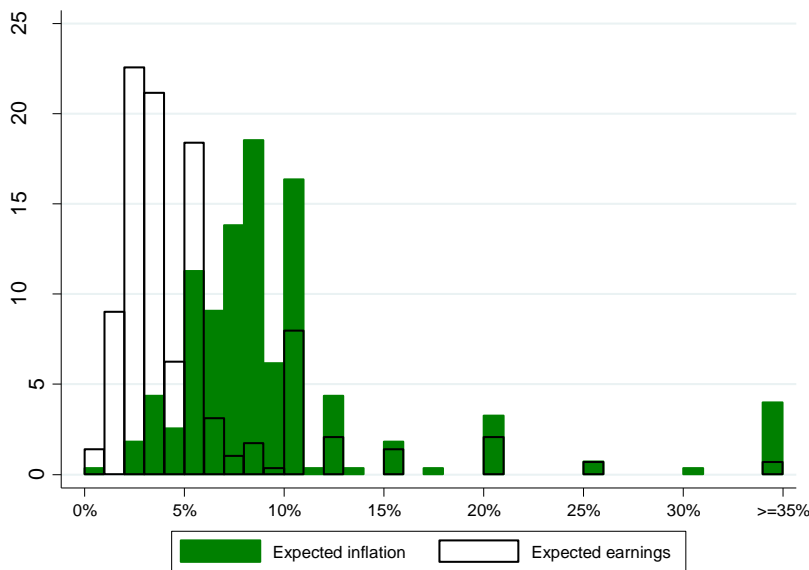
Notes: this figure shows responses to the qualitative question about earnings in comparison to consumer prices over the next 12 months of working respondents who expect their earnings to increase. Percent share of total responses (weighted). Based on 364 and 304 responses in February and March, respectively.

We also inquire about quantitative earnings in April. Together with the expected inflation values, this allows for the calculation of expected real earnings growth. Figure 5 plots both expected inflation and earnings growth distributions for those respondents who work and expect their earnings to increase.

The distribution of expected inflation rates has more mass to the right compared to the distribution of expected earnings growth. Mean expected earnings growth for this subgroup is 5.8%, while the median is 4%. Despite assuming that nominal earnings will increase, these respondents expect a 3.5% decline in real earnings on average, given that their average expected inflation amounts to 9.3%. In order to put this into perspective, average hourly earnings in Ireland grew by 2.5 % between 2020Q4 and 2021Q4. The Central Bank of Ireland expects compensation per employee to increase by 2.3% in 2022 but to decline in real terms by 4.2% as inflation is expected to be 6.5% (CBI, 2022).<sup>17</sup>

<sup>17</sup> Note that our results focus only on those working respondents who expect earnings to increase. This makes a direct comparison with the CBI's forecast difficult.

**Figure 5. Expected earnings growth and inflation rate**



Notes: this figure shows the distributions of expected earnings growth (white bars) and expected inflation (green bars) over the next 12 months in percentage terms (unweighted). Only working respondents who expect their earnings to increase are considered (275 responses for each question).

### Labour market conditions

In both February and March, we asked respondents whether they had taken any action to seek higher wages over the previous three months to compensate for changes in living costs. Around a quarter of employed respondents each month said they had. The share of those saying “no” increased from 43.6% in February to 52.9% in March<sup>18</sup>, thus the majority of respondents have not actively demanded higher wages to compensate for higher living costs. This may indicate a relative weakening of perceived bargaining position, increased uncertainty, or declining sentiment since the war in Ukraine broke out, despite the buoyant labour market.

<sup>18</sup> Note that this only refers to the previous three months. Those who did take action prior to December would report “No” in March (as the survey took place early in March).

## 4. Conclusion

This letter provides a snapshot into what Irish households think about future developments in consumer prices and their earnings. This information is important for monetary policymakers in light of very high inflation rates and tight labour markets. If high inflation rates are to become more persistent, this may lead to inflation expectations exceeding the inflation target of 2% over the medium term and unsustainable wage increases that would in turn feed into further increases in inflation.

Based on survey evidence collected between February and April, Irish workers do not appear to expect very strong earnings growth over the next year despite their elevated inflation expectations. In real terms, this implies that they expect their earnings to decline. This may have implications for consumer spending decisions in the near future as they expect a decrease in their purchasing power. If this trend is reflected across the euro area it will have implications for the euro area monetary policy.

Looking ahead, people may want to recoup some of this loss in purchasing power. Stronger wage demands may surface in time, especially if labour market conditions remain strong and/or inflation expectations over the medium term increase, which can impact wage growth over the next couple of years. This has been taken into account to some extent in the macroeconomic projections of the euro area central banks ([ECB, 2022](#)). Policymakers, therefore, need to closely observe signs of wage growth that would not be consistent with labour productivity developments and the inflation target over the medium term. Surveys like this one could provide timely signals in this respect.

## Appendix

**Table A1. Main characteristics of the respondents**

	Pooled data (unweighted)	Pooled data (weighted)	Target
<b>Gender (n=4304)</b>			
<i>Female</i>	48%	49%	50%
<i>Male</i>	52%	51%	50%
<b>Age (n=4304)</b>			
18-24	4%	10%	11%
25-34	7%	16%	18%
35-44	13%	21%	21%
45-54	21%	18%	18%
55-64	32%	15%	14%
65+	23%	20%	19%
<b>Education (n=4304)</b>			
<i>Less than leaving cert</i>	9%	15%	15%
<i>Leaving cert</i>	13%	25%	26%
<i>Post-leaving cert qualification</i>	25%	14%	14%
<i>Third level degree</i>	54%	46%	45%
<b>Region (n=4304)</b>			
<i>Connacht-Ulster</i>	19%	18%	18%
<i>Dublin</i>	27%	32%	28%
<i>Leinster</i>	26%	25%	27%
<i>Munster</i>	29%	25%	27%
<b>Income* (n=3763)</b>			
<i>Less than €20,000</i>	19%	23%	24%
<i>€20,000 - €30,000</i>	18%	18%	17%
<i>€30,000 - €50,000</i>	29%	29%	30%
<i>€50,000 - €80,000</i>	23%	21%	20%
<i>Over €80,000</i>	11%	9%	9%
<b>Employment status (n=4264)</b>			
<i>Full-time student</i>	2%	6%	7%
<i>Homemaker</i>	3%	6%	6%
<i>Retired</i>	26%	17%	16%
<i>Unable to work</i>	4%	6%	8%
<i>Unemployed</i>	2%	4%	6%
<i>Working full time</i>	51%	49%	46%
<i>Working part time</i>	12%	12%	12%
<b>Sector of employment*(n=2579)</b>			
<i>Construction</i>	8%	7%	7%
<i>High-customer facing services</i>	20%	30%	30%
<i>Low-customer facing services</i>	23%	26%	25%
<i>Manufacturing</i>	9%	10%	10%
<i>Public sector and civil service</i>	40%	28%	27%

Notes: based on pooled data for February, March and April. The poll was weighted according to: Age, Gender, Education, Region, Income, Working Status, Sector of Employment and the interlocked relationship between Region, Gender and Income. Weights were trimmed to minimise bias. Sources: Central Bank Source Data, CSO, Labour Force Survey.

Table A2. Main questions

	Question	Answer options	Survey
Q1.	"By comparison with the past 12 months, how do you expect that consumer prices will develop in the next 12 months?"	<ul style="list-style-type: none"> <li>• Increase more rapidly ++</li> <li>• Increase at the same rate +</li> <li>• Increase at a slower rate =</li> <li>• Stay about the same -</li> <li>• Fall --</li> <li>• Don't know</li> </ul>	February, March, April
Q2.	"If you were working in the same job (same hours, same employer, etc.), how do you think your annual earnings will change over the next year (before taxes, deductions)?"	<ul style="list-style-type: none"> <li>• Increase a lot ++</li> <li>• Increase slightly +</li> <li>• Stay about the same =</li> <li>• Decrease slightly -</li> <li>• Decrease a lot --</li> <li>• Don't know</li> </ul>	February, March, April
Q3.	"What do you expect the rate of inflation to be over the next 12 months in percentage terms? (Please give a single figure estimate)"	Open answer: ... %.	March, April
Q4.	"By about what percent do you expect your earnings to increase or decrease over the next 12 months? Please give your best guess."	Open answer: ... %.	April
Q5.	"How do you think these changes in your earnings, will compare to changes in overall consumer prices? I think my annual earnings over the next year would increase by ..."	<ul style="list-style-type: none"> <li>• ... a lot more than increases in prices ++</li> <li>• ... somewhat more than increases in prices +</li> <li>• ... about as much as the increases in prices =</li> <li>• ... somewhat less than the increases in prices -</li> <li>• ... a lot less than the increases in prices --</li> <li>• Don't know</li> </ul>	February, March
Q6.	"In the past three months have you (or has your trade union) taken any action, to pursue a higher wage at your current job in order to compensate for changes in costs of living?"	<ul style="list-style-type: none"> <li>• No, I have not considered this</li> <li>• I may consider doing something about it in near future</li> <li>• I have strongly considered taking action in near future</li> <li>• Yes - I raised this with my employer/manager</li> <li>• Yes - I raised this with a trade union</li> <li>• Yes - other</li> <li>• No, but I have sought a higher wage for other reasons</li> </ul>	February, March

**Table A3. Regressions results**

<i>Gender</i>					
	Male	0.72***	0.72***	0.70***	0.68***
<i>Income</i>					
	Less than €20,000	-1.64***	-1.57***	-1.74***	-1.78***
	€20,001 - €30,000	-0.382*	-0.32	-0.231	-0.225
	€50,001 - €80,000	0.598***	0.645***	0.640***	0.649***
	Over €80,000	0.811***	0.747***	0.751***	0.692***
<i>Education</i>					
	Less than leaving cert	-0.77**	-0.85***	-0.84***	-0.81**
	Post-leaving cert qualification	0.17	0.08	0.12	0.17
	Third level degree	0.03	-0.10	-0.11	-0.1
<i>Age</i>					
	18-24	0.81***	0.83***	0.90**	0.97**
	25-34	0.35*	0.40**	0.31	0.30
	45-54	-0.24	-0.17	-0.22	-0.23
	55-64	-0.33*	-0.24	-0.28	-0.28
	65+	0.48*	0.71**	0.61**	0.60**
<i>Sector of employment</i>					
	Construction		-0.27	-0.14	-0.13
	High customer facing services		-0.50***	-0.50**	-0.47**
	Manufacturing		-0.24	-0.16	-0.12
	Public sector and civil service		-0.35**	-0.38**	-0.36**
<i>Region</i>					
	Connacht-Ulster			-0.39**	-0.41**
	Leinster			-0.13	-0.11
	Munster			-0.07	-0.06
<i>Tenure</i>					
	Renter			0.10	0.12
<i>Survey month</i>					
	March			0.06	0.07
	April			-0.44***	-0.44***
<i>Main issue</i>					
	COL				-0.17
	Housing				-0.05
<i>Inflation expectations</i>					
	Lower inflation				-0.21
	Higher inflation				-0.17
Observations		2442	2332	2199	2170
Pseudo R-squared		0.109	0.116	0.127	0.128

Notes: The reported coefficients reflect differences from the base respondent with the following characteristics: a female, holding leaving certificate qualification; working in the low-customer facing services sector, earning €30,000-50,000 annually, belonging to the 35-44 age group, living in Dublin county, a renter, expecting a stable inflation rate. Higher/lower inflation refers to a categorical variables denoting qualitative inflation expectations. Main issue: COL (housing) is a binary variable taking value of 1 if the respondent mentions cost of living (housing) as one of two main issues that Ireland faces today and 0 otherwise. \*, \*\* and \*\*\* denote statistically significant coefficients at 10%, 5% and 1%.



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