Consumers' quantitative inflation perceptions and expectations in the euro area and the EU: an evaluation after 12 years[1]

Executive summary

1. Introduction

The last evaluation of the European Commission's (EC) dataset of consumers' quantitative inflation perceptions and expectations was performed jointly by the EC and the European Central Bank (ECB) in 2010. The assessment documented that consumers hold very different opinions of inflation depending on their income, age, education and gender. Quantitative inflation estimates are broadly consistent with the corresponding qualitative estimates, in the sense that the two sets of responses are highly correlated over time. However, the 2010 assessment also highlighted several concerns related to the quantitative data, namely that respondents tend to overestimate actual inflation developments (as measured by the Harmonised Index of Consumer Prices (HICP)), particularly in terms of inflation perceptions, and that they do so by more than in comparable surveys conducted outside the euro area. This assessment covered the time span between May 2003 and October 2009[2]. In the light of the additional data collected since October 2009 and the sharp fluctuations in the actual inflation rate during this period, the aim of the present paper is to provide an updated analysis of the data set, widening the scope to the EU. Focusing in particular on recent developments, the study contributes to the ongoing discussion on the relevance and potential uses of quantitative estimates of inflation by consumers.

2. The EC consumer survey

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[1] Jointly prepared by staff from DG ECFIN (Roberta Friz, Christian Gayer) and the ECB (Rodolfo Ariolo and Aidan Meyler (DG-Economics), Colm Bates, Heinz Dieden and Iskra Pavlova (DG-Statistics)). The views expressed in this study are those of the authors and do not necessarily reflect those of the European Commission or of the European Central Bank.

The dataset with anonymised micro data on quantitative inflation perceptions and expectations is not regularly published and was provided to the ECB by DG ECFIN for joint research purposes, based on the agreement by all national partner institutes from the "Joint Harmonised EU Programme of Business and Consumer Surveys". Furthermore, the agreements between DG ECFIN and the ECB concerning data access rights, storage, security and dissemination of the data are governed by a Memorandum of Understanding, signed by the Director-Generals of the EC's DG ECFIN and ECB's DG Statistics in July 2015.

[2] A short update of the results was published in the EC's 'European Business Cycle Indicators' (EBCI, 3rd quarter 2014): http://ec.europa.eu/economy_finance/publications/cycle_indicators/2014/pdf/ebci_3_en.pdf.

The section sets the background for the analysis by providing a description of the qualitative inflation perceptions (Q5) and expectations (Q6) questions and how they are aggregated.

2.1 The dataset on quantitative inflation perceptions and expectations

The section describes the quantitative questions on inflation perceptions (Q51) and expectations (Q61), the methodological survey approach and the results of previous Task Force experiments carried out in France and Italy.

2.2 The aggregation of survey results at euro area level

In this section two ways to aggregate the quantitative inflation perceptions and expectations data will be described. As the surveys are conducted on a country basis, a weighting scheme is required to compute aggregate results for the euro area and the EU. There are two different ways to view the data, leading to (at least) two different aggregation schemes, each of them being more suited to a specific purpose. Treating each national dataset as a random sample drawn from an independent country specific distribution allows a comparison of the resulting averages with other euro area/EU indicators, while considering all individual observations from all countries as an unbalanced random draw from a single euro-area/EU distribution enables to calculate higher moment statistics at the euro area and EU levels.

3. Empirical features of the experimental dataset: consumers' quantitative estimates of inflation

In this section the Q51 and Q61 data is analysed using the mean. The analysis shows that despite differences in levels, the survey series closely track the dynamics of HICP inflation. Nevertheless, consumers' quantitative estimates of expected and, to a greater extent, perceived inflation continue to overestimate inflation as measured by the HICP.

3.1 The overestimation bias and the design of the survey questions

This section compares the survey results with other similar surveys carried out in the US and the UK. It discusses the design features of the surveys that are supposed to have an impact on the level of consumers' collected quantitative inflation estimates. It also investigates the potential (macro-)economic factors driving the observed overestimation bias.

3.2 Distribution of replies, outliers and trimming measures

This section provides descriptive statistics on the inflation estimates (perceptions and expectations), analysing the full distribution of the survey results. Different trimming approaches are presented with a view to excluding 'implausible' responses and reducing the overestimation bias. Apart from this ad hoc approach to cleansing the data, the section will introduce proposals to exploit signalling provided by either respondents' rounding or consistent answering to other survey questions.

3.3 Different people, different inflation assessments?

Using the socio-demographic breakdowns (age, gender, income and educational level) available in the dataset, the analysis shows that particular demographic groups continue to systematically perceive and expect inflation to be higher than other groups.

3.4 Country results

A country analysis is performed in order to check if – as in the past analysis - the features highlighted for the euro area/EU aggregates tend to be also valid across individual countries. Some country groupings are identified in that context.

3.5 Business cycle effects

This section investigates whether the (observed phases of) overestimation of HICP inflation can be linked to business cycle effects.

4. Comparative assessment of quantitative versus qualitative replies

In order to verify if consumers are consistent with their qualitative inflation sentiment when providing a quantitative estimate (for example, those who perceive inflation to have "risen a lot" are also those who, on average, provide the highest inflation estimates of perceived inflation), a cross-check is carried out.

5. Concluding remarks and proposed way forward

Further work could investigate in more detail the idea of Binder (2015) that if consumers are highly uncertain regarding their inflation assessment they are more likely to report round numbers; conversely, consumers reporting quantified inflation perceptions with decimal points signal more certain assessments. The dataset can also be used to analyse in detail whether respondents are 'theory-consistent' in the sense of responding in line with a 'Phillips curve' type of relation between inflation and unemployment expectations, thus requesting the joint analysis of Q51/61 together with Q7 on unemployment expectations. Further interesting cross-checks of the data are conceivable, e.g. with respect to the link between consumers' price expectations and their anticipated buying decisions.