

Box Article 3: **Salient Prices in Consumer Expectations¹**

Households' inflation expectations play a key role in inflation dynamics. Changes in household expectations influence their economic behavior. For instance, if consumers expect prices to rise, they might be induced to spend more today while they perceive prices to be relatively low. Consumer expectations could also influence wage negotiations, as consumers may bargain for higher wages to align their spending power with the projected prices of goods and services. Consequently, monetary authorities strive to ensure that households' inflation expectations are well-anchored, considering that these are integral to achieving the central bank's mandate of price stability.

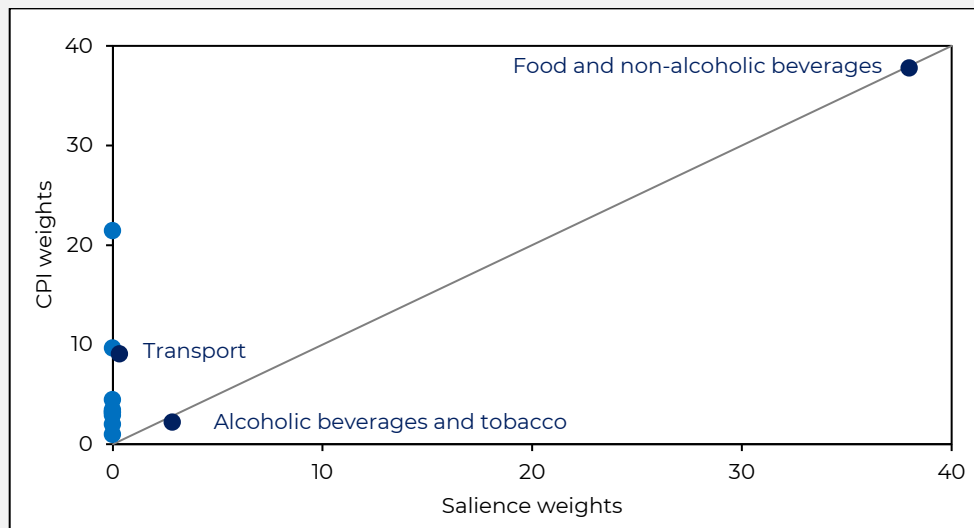
Using data from the Bangko Sentral ng Pilipinas (BSP) Consumer Expectations Survey (CES), this box article aims to determine which price changes are salient in forming Filipino consumers' inflation expectations. The study employed a machine learning method called Least Absolute Shrinkage and Selection Operator (LASSO). This follows a Federal Reserve Bank of Cleveland study conducted by Campos, McMain, and Pedemonte in 2022. LASSO can extract a subset of indicators that best predict a given target variable—in this case, consumer expectations.

Specifically, the study assesses which among the price changes in households' expenditure items in the past year best predict their inflation expectations for the next year. This is done by regressing the weighted mean of consumers' 12-month-ahead inflation point forecasts against the 12-month average year-on-year inflation rates of various Consumer Price Index (CPI) components. Subjecting the model to LASSO regularization filters out variables with the highest predictive contributions.

Figure 1 shows the results of this exercise for major commodity groups (i.e., two-digit CPI items). Consumers pay the most attention to inflation in food, beverages, tobacco, and transport. The points can be analyzed with respect to the 45-degree gray line, which represents where the data points would lie if their salience or LASSO weights were equal to their CPI weights.

It can be observed that the salience weights of two groups (i.e., food and non-alcoholic beverages, alcoholic beverages and tobacco) align closely with their actual CPI weights. This suggests that as households accumulate information on price changes throughout the year, they form expectations largely in line with the composition of their expenses. The salience weights of the commodity groups also sum up to less than 50.0 percent, which suggests that factors beyond historical inflation may be influencing consumer expectations.

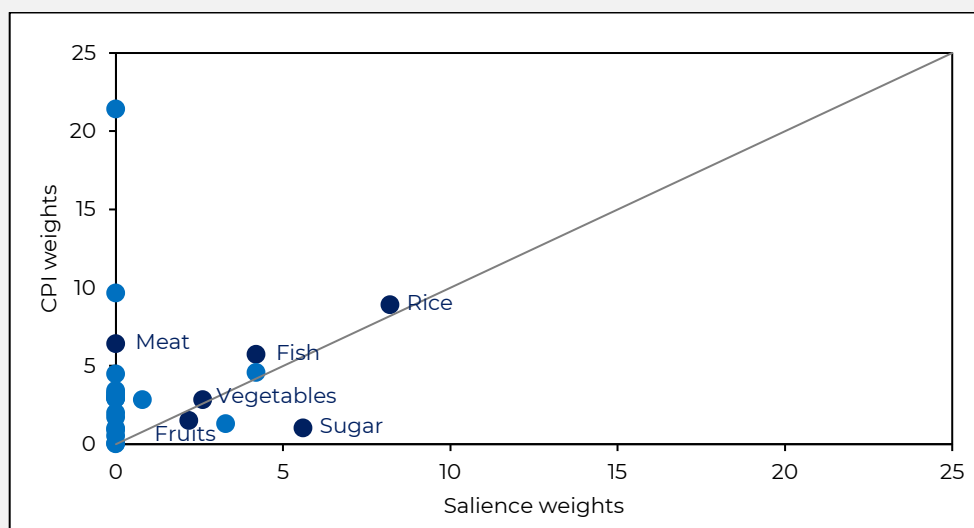
Figure 1
Salience of Consumer Price Index Commodity Groups
 in percent



Source: Bangko Sentral ng Pilipinas staff calculations

Further disaggregating food into its component items, Figure 2 shows that rice is the most salient among food prices, with its salience approximating its CPI weight. Other salient food items are sugar, fish, vegetables, and fruits.

Figure 2
Salience of Disaggregated Food Items
 in percent

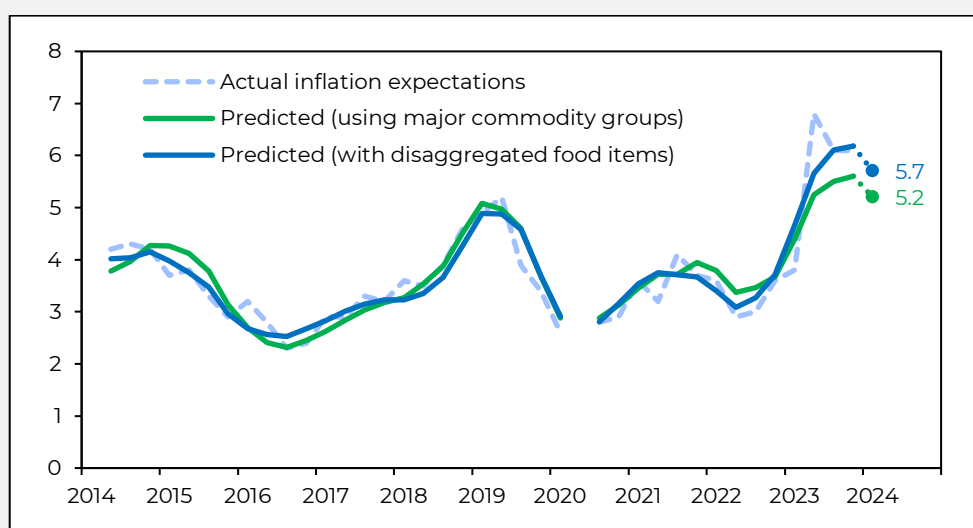


Source: Bangko Sentral ng Pilipinas staff calculations

The results are broadly similar across demographics, although groups may vary slightly in their attention to certain items. For instance, low-income respondents appear to pay greater attention to food (38.6 percent salience weight) and rice (10.0 percent) compared with middle-income (35.7 percent for food and 7.1 percent for rice) and high-income (35.2 percent for food and 5.9 percent for rice) classes.

The LASSO models were also tested for their ability to nowcast inflation expectations. Although simple, the study wanted to explore if the models could reasonably gauge where inflation expectations are likely to move in future quarters. As shown in Figure 3, the in-sample forecasts for the LASSO models seem to track CES inflation expectations reasonably well. The Q1 2024 nowcasts suggest a possible easing of inflation expectations from 6.1 percent in Q4 2023 to 5.2 percent for the model using major commodity groups and 5.7 percent for the model with disaggregated food items. Indeed, recent CES data showed that household expectations declined to 5.5 percent in Q1 2024.

Figure 3
Least Absolute Shrinkage and Selection Operator Nowcasts
in percent²



Source: Bangko Sentral ng Pilipinas staff calculations

In addition to pointing where inflation expectations might head, the salience of specific consumption items such as food could provide policymakers with insights into the benefits of a more targeted communication strategy. While supply-side factors that affect inflation are beyond the control of central banks, a nuanced discussion of salient price trends may help anchor the public's expectations.

ENDNOTES

- 1/ The authors of this box article are Cherrie R. Mapa, Mary Krysllette C. Bunyi, and Eddie Boy L. Fuentes. A full version of this study will be forthcoming in the BSP Discussion Paper Series.
- 2/ The CES enumeration for Q2 2020 was cancelled amid quarantine measures during the height of the COVID-19 pandemic.

REFERENCES

Campos, C., McMain, M., & Pedemonte, M. (2022). *Understanding which prices affect inflation expectations* [Federal Reserve Bank of Cleveland Economic Commentary No. 2022-06]. <https://doi.org/10.26509/frbc-ec-202206>