

# Household Inflation Expectations in India: Emerging Trends, Determinants and Impact of Monetary Policy

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*Inflation expectations of households experienced a considerable uptick following the COVID-19 pandemic, geopolitical tensions and consequential economic uncertainty amidst supply chain disruptions and inflationary pressures. Against this backdrop, this article examines emerging trends in household inflation expectations, their underlying determinants and the impact of monetary policy interventions. Findings reveal that improved domestic economic conditions, coupled with policy actions, have helped household inflation expectations ebb from the highs witnessed around the pandemic. Past inflation perceptions generally tend to keep the household expectations sticky. However, influence of realised inflation dynamics increases when adjusted for extreme values. Headline inflation is more influential than food inflation, but high and broad-based food inflation may keep overall expectations elevated, underscoring the importance of policy emphasis on headline inflation.*

## Introduction

Inflation expectations significantly influence economic behaviour and macroeconomic outcomes. They shape individual decisions about consumption,

saving, and investment, directly impacting aggregate demand. Businesses use these expectations to set prices and negotiate wages. Therefore, central banks prioritise managing inflation expectations to maintain price stability, especially in the inflation targeting (IT) framework.

Household inflation expectations are particularly important because households represent the largest and most diverse economic group, directly driving consumption. Unlike professional forecasters, households' expectations are often shaped by personal experiences and are susceptible to fluctuations. Although household inflation expectations have generally moderated in countries with the adoption of IT, the COVID-19 pandemic introduced substantial uncertainty with supply chain disruptions and labour market shocks, thereby widening the gap between households and professional inflation expectations. Given these recent developments, re-examining emerging trends in household expectations and their determinants is crucial for effective policy intervention.

This study uses unit level data on 1-year ahead median inflation expectations from the Reserve Bank's Inflation Expectations Survey of Households (IESH), to understand their dynamics post pandemic, key determinants and effectiveness of monetary policy in anchoring these expectations, particularly under the flexible inflation targeting (FIT) regime. Findings reveal a decline in inflation expectations from the highs of 2014, aided by the transition to the FIT regime, easing of global inflationary pressures, and timely domestic policy interventions.

This is corroborated by a leftward shift in the distribution of median household inflation expectation (denoting a fall in median expectations over the years), and reduced disagreement among households (as seen from lower standard

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<sup>^ ^</sup> The authors are from DEPR. The views expressed are those of the authors and do not necessarily reflect those of the RBI. We thank Dr. Sarat Chandra Dhal for his valuable comments and feedback; Arti Sinha, G V Nadhanael, Somnath Sharma, Soumasree Tewari, Shashi Kant and Manu Swarnakar for insightful discussions; Gairika Bannerjee and Ranajoy Guha Neogi for data assistance.

deviations). However, the pandemic reversed this trend, heightening overall inflationary concerns, and widening the disagreement across groups. Adjusting for extreme values, we observe that realised inflation dynamics generally exerts a stronger influence, with broad-based food price inflation playing larger role during high inflation episodes. This suggests that our approach in handling extreme-value adjustments furthers the understanding and responsiveness of expectations to current economic conditions.

The rest of the paper is structured as follows: Section II reviews the related literature. Section III outlines the IESH data and adjustments for extreme value observations. Section IV presents stylised facts from unit-level observations in the IESH. Section V discusses the empirical methodology and results. Section VI concludes.

## II. Literature

Various theories have explored the role of inflation expectations in shaping actual inflation dynamics and the overall macroeconomy ranging from adaptive (Friedman, 1968) to rational<sup>1</sup> (Muth, 1961; Lucas, 1973). Variants of rational expectations theory consider potential information frictions and bounded rationality in expectations.<sup>2</sup>

More recently, behavioural models emphasise the role of personal experiences and noticeable price changes. Survey-based measures of household and business inflation expectations offer valuable insights into diverse expectations, addressing the limitations of full-information rational expectations (FIRE) that fail to account for the heterogeneity in agents' expectation formation and revisions (Sheffrin, 1996; Mankiw *et al.*, 2004; Coibion *et al.*

*al.*, 2018; D'Acunto *et al.*, 2024). Recent literature outlines the following key determinants of inflation expectations.

**A. Behavioural factors:** Household inflation expectations are influenced by perceived economic environment (Jonung, 1981; Cavallo *et al.*, 2017; Coibion *et al.*, 2020), with individuals relying on lifetime experiences that may introduce biases due to *rational inattention* and *cognitive biases* (Lucas 1972, 1973; D'Acunto *et al.*, 2021, 2023). Simple decision-making rules stemming from *habit formation* may distort expectations causing households to overreact or underreact to new information (Schafer, 2022).

**B. Observed price changes:** Households use changes in the prices of *frequently purchased* goods, particularly essentials like food and energy items, to gauge overall inflation (Kumar *et al.*, 2015; D'Acunto *et al.*, 2021, 2024; Weber *et al.*, 2022; Patzelt and Reis, 2024). Households perceive price increases as more lasting than declines (Eichenbaum *et al.*, 2011).

**C. Social influences:** *Herd behaviour*, *media* exposure and professional forecasts can influence expectations. While the impact of media is limited, households often trust personal *family and social networks* more than traditional news sources (Caroll, 2003; Binder, 2017; Coibion *et al.*, 2020, 2022; Weber *et al.*, 2022, Bailey *et al.*, 2018).

**D. Individual characteristics:** Older individuals with longer lifetime experiences of inflation and those with higher *economic literacy* and income levels tend to have more informed inflation expectations (Aguiar and Hurst, 2005; Malmendier and Nagel, 2016; Coibion *et al.*, 2018, 2020; D'Acunto *et al.*, 2021, 2023, 2024).

**E. Monetary policy:** *Monetary policy actions* and *central bank communication* can shape inflation expectations by reducing the persistence of inflation shocks (Mishkin, 2007; Bernanke, 2007; D'Acunto

<sup>1</sup> Also known as full-information rational expectations (FIRE) model (Lucas, 1972, 1976; Taylor, 1979; Calvo, 1983).

<sup>2</sup> Commonly known as sticky information or noisy information models (Mankiw and Reis, 2002; Caroll, 2003; Woodford, 2003; Sims, 2003; Coibion and Gorodnichenko, 2015; Coibion *et al.*, 2018).

*et al.*, 2024). Effective communication, like forward guidance, can help in managing public expectations (Mehra and Reilly, 2008; D'Acunto *et al.*, 2021).<sup>3</sup>

**F. Domestic and global influences:** Domestic geographic location can shape inflation expectations, with individuals in the same area often experiencing similar price changes and economic conditions (Stroebel and Vavra, 2019). *Domestic factors* like growth in gross domestic product (GDP), unemployment rates, supply shocks, and monetary policy credibility; as well as *global factors* like commodity price inflation, volatility in exchange rates financial markets also affect expectations. These factors have a greater impact in emerging markets compared to advanced economies (Kose *et al.*, 2019; Moessner, 2021). Nevertheless, while short-term inflation expectations do vary with business cycles and macroeconomic shocks, long-term expectations remain anchored as long as they are not significantly influenced by fluctuations in short-term expectations (Posen, 2011).

Inflation expectations in India are influenced by both domestic factors like GDP growth, actual inflation (headline and core), food and oil prices, monetary policy and fiscal policy; and global factors like international oil prices, exchange rate fluctuations, policy uncertainty and financial market volatility.<sup>4</sup> Food price shocks, aggregate demand conditions, monetary policy actions, and global shocks significantly shape household expectations, while the impact of oil price shocks is mixed (Pattanaik *et al.*, 2020). The Reserve Bank's communication and adoption of the FIT regime

have helped manage inflation expectations (Goyal and Parab, 2019; Asnani *et al.*, 2019; Pattanaik *et al.*, 2023; Eichengreen and Gupta, 2024). However, only a few studies have explored issues related to bias adjustment in survey-based expectations (Das *et al.*, 2019; Pattanaik *et al.*, 2023).<sup>5</sup>

Studies on household inflation expectations in India have mostly focussed on (i) aggregate-level pre-pandemic data; (ii) other inflation measures, such as the Wholesale Price Index (WPI) or Consumer Price Index for Industrial Workers (CPI-IW); and (iii) households' current perceptions of inflation. These limit insights into the near-term household expectations and influence of monetary policy.

To address these gaps, this article analyses 1-year ahead median inflation expectations during September 2009 to March 2025 using unit level data from the IESH. The study also proposes alternate ways to adjust for extreme values in the survey-data, rather than the present practice of bunching all high values over 16 per cent to prevent distorting the true distribution of responses. Factors influencing household inflation expectations are also analysed, using both the aggregate series ("reported") and the adjusted aggregate series ("exclusion"; "trimmed") calculated from unit-level inflation expectations.

### III. Inflation Expectations Survey of Households (IESH): Details

The IESH survey covers about 6,000 households across 19 cities, and is being conducted bi-monthly since 2016 (quarterly prior to that).<sup>6</sup> Respondents aged 21+ answer both qualitative and quantitative questions regarding expected inflation in various

<sup>3</sup> Evidence on impact of central bank communication regarding interest rate decisions on expectations is mixed. The effect of reading official statements is similar to being informed about inflation target (D'Acunto *et al.*, 2020).

<sup>4</sup> For further details, please refer to Patra and Ray (2010); Goyal and Parab (2019); Goyal and Parab (2021); Eichengreen and Gupta (2024); Ghosh *et al.* (2021); Bhattacharya (2023); Pattanaik *et al.* (2020); Pattanaik *et al.* (2023).

<sup>5</sup> Sharma and Bicchil (2018), Shaw *et al.*, (2019) and Shaw (2023) discuss properties of households' inflation expectations.

<sup>6</sup> The IESH survey uses a two-stage random sampling method since 2018. Prior to that, it used a quota sampling method with a focus on major cities in different regions of India. For further details on the IESH, please refer to Shaw *et al.*, (2019); RBI Bulletin (May 2010); questionnaire, press releases, metadata, and unit level data.

categories for the current month, next three months, and next 12 months.<sup>7</sup> They choose from expected inflation rates ranging from "0-1 per cent" to "15-16 per cent" – in increments of 100 basis points; "greater than (or equal to) 16 per cent" or "No Idea".

### Adjustment for Extreme Values

The IESH reported series considers all values exceeding 16 per cent as 16.5 per cent leading to the median inflation expectation distribution to be bounded between 0.5 per cent and 16.5 per cent, potentially limiting information from higher values.<sup>8</sup> We propose two alternative methods: exclusion and trimming.

1. The "**Exclusion**" series removes respondents reporting inflation expectations below 1 per cent, above 16 per cent, or "No idea".
2. The "**Trimmed**" series excludes responses below 1 per cent and "No idea"; and removes

only the top 20 per cent of high expectation values, thereby retaining more of the true values reported by agents (even those above 16 per cent).

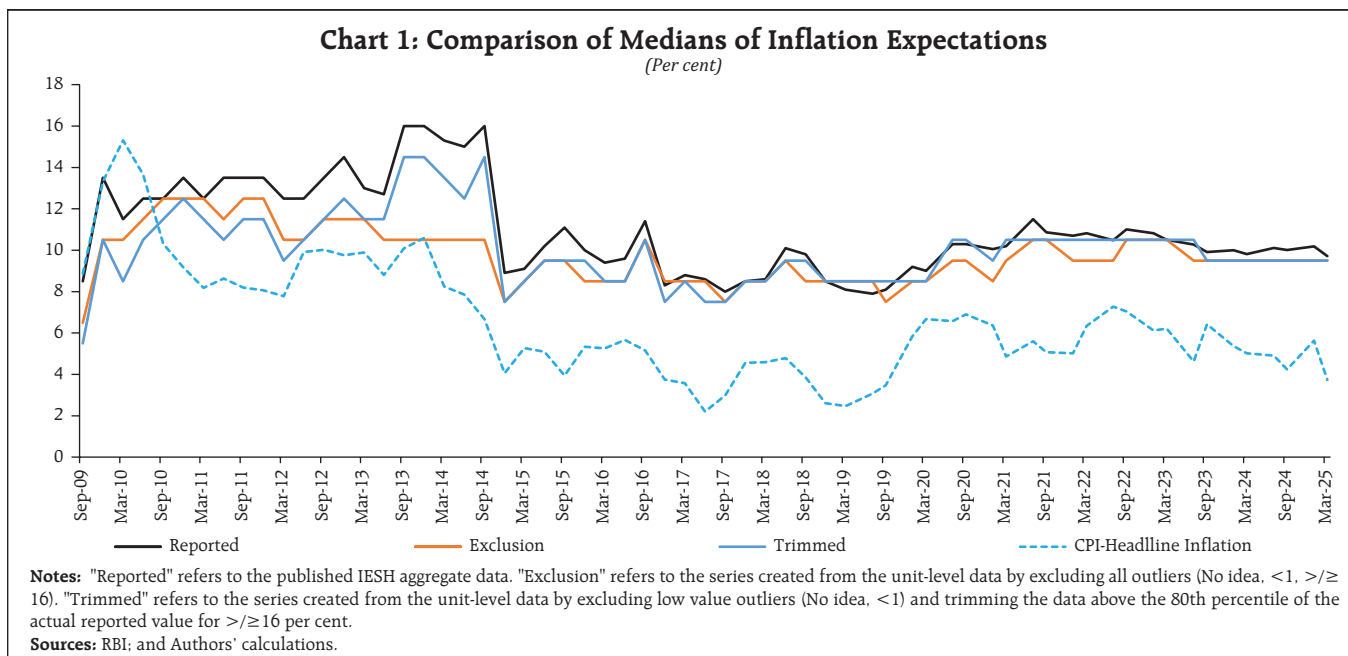
Both methods result in median expectations higher than actual inflation but lower than the aggregate reported series (Chart 1; Annex A). We focus on 1-year ahead inflation expectations in the reminder of the article.<sup>9</sup>

## IV. Stylised Facts

The IESH unit-level data analysis *inter alia* establishes the following ten facts.

### 1. Persistent systematic upward bias in household expectations

Indian household inflation expectations have consistently exceeded professional forecasters for nearly two decades, notwithstanding stable inflation

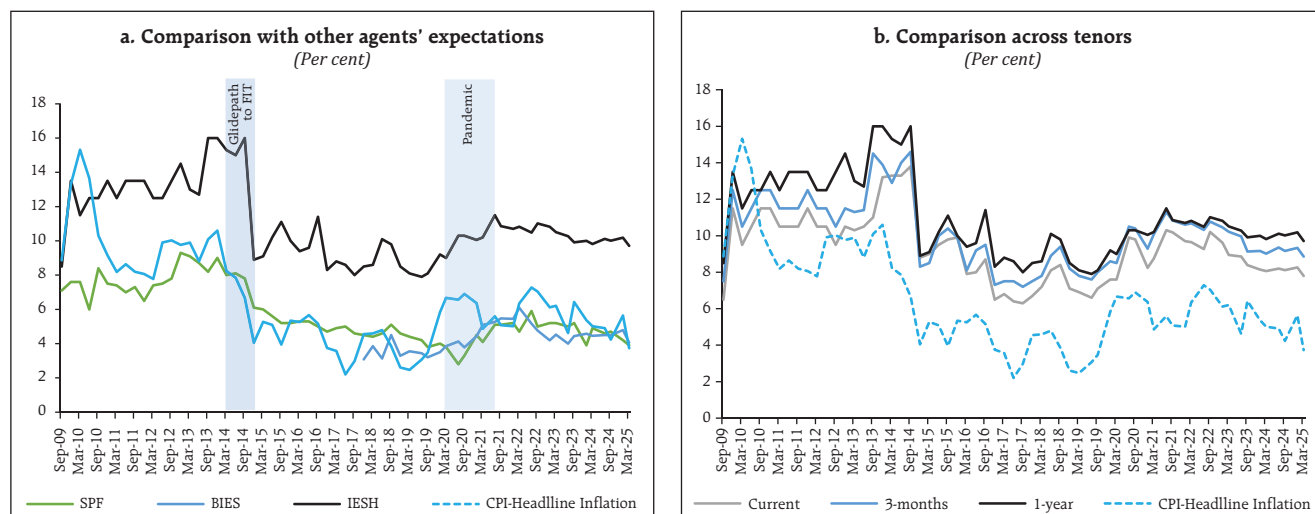


<sup>7</sup> Categories include general prices, food, non-food, housing, durables, and services.

<sup>8</sup> For other methods of outlier-adjustment, please refer to Das *et al.*, (2019).

<sup>9</sup> For analyses using the 3-month ahead inflation expectations, and more exhaustive results on both 3 months ahead and 1 year ahead expectations for reported, exclusion and trimmed series, please refer to Ruhi *et al.*, 2026 (mimeo).

<sup>10</sup> Globally, households tend to report higher expectations than the professionals (Weber *et al.*, 2023; D'Acunto *et al.*, 2024).

**Chart 2: Systemically Upward Bias in Household Expectation**

**Notes:** 1. Expectations data pertain to 1-year ahead for Business Inflation Expectations Survey (BIES) and IESH; and 3-quarters ahead (closest available to 1-year) for Survey of Professional Forecasters (SPF).

2. Data for BIES are from various press releases since 2017-18:Q3. Prior to that, the midpoint of the range with maximum probability has been taken.

**Sources:** MoSPI (CPI); IIM(A) [BIES]; RBI (SPF, IESH); and Authors' calculations.

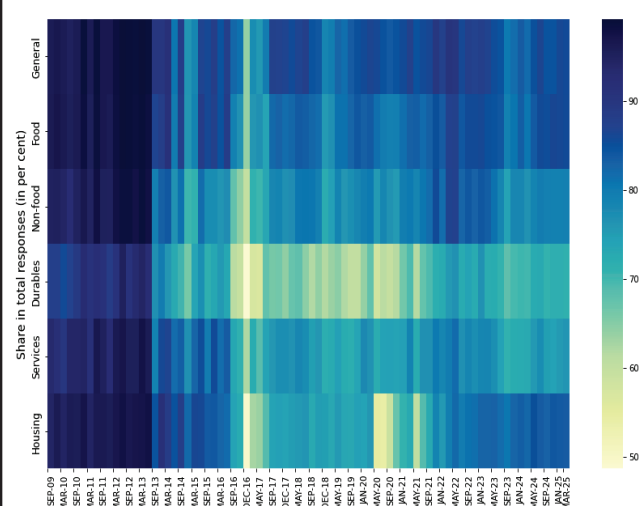
periods between 2014-15 and 2019-20 (Chart 2a).<sup>10</sup> However, expectations shifted downwards in line with global inflation and benefitting from the transition to the FIT regime<sup>11</sup>, and proactive fiscal measures to address supply side constraints. More recently, in 2024-25:H2, as headline inflation eased, forecasts of both professionals and households show moderation. However, household expectations adjusted at a slower pace.

## 2. Inflation expectations rise with the forecast horizon, align with high inflation

Inflation expectations increase with the forecast horizons (Chart 2b). Nonetheless, expectations across the horizon have seen a downward shift since 2014-15 with the announcement of the glide-path and easing inflation levels. The wedge between 3-month and 1-year expectations has also considerably narrowed, notwithstanding the increase since 2023-24.

## 3. Higher expectations in headline, food and housing

Since 2022, more broad-based inflation concerns were expressed by households, particularly in headline, food, and housing (Chart 3).

**Chart 3: Inflation Expectations across Groups**

**Note:** Lighter colors indicate fewer proportion of households expecting price increases.

**Sources:** IESH, RBI; and Authors' calculations.

<sup>11</sup> The glide-path towards the FIT regime was announced in 2013-14: Q4.



#### 4. Headline matters more than food inflation; but broad-based food inflation keeps expectations elevated

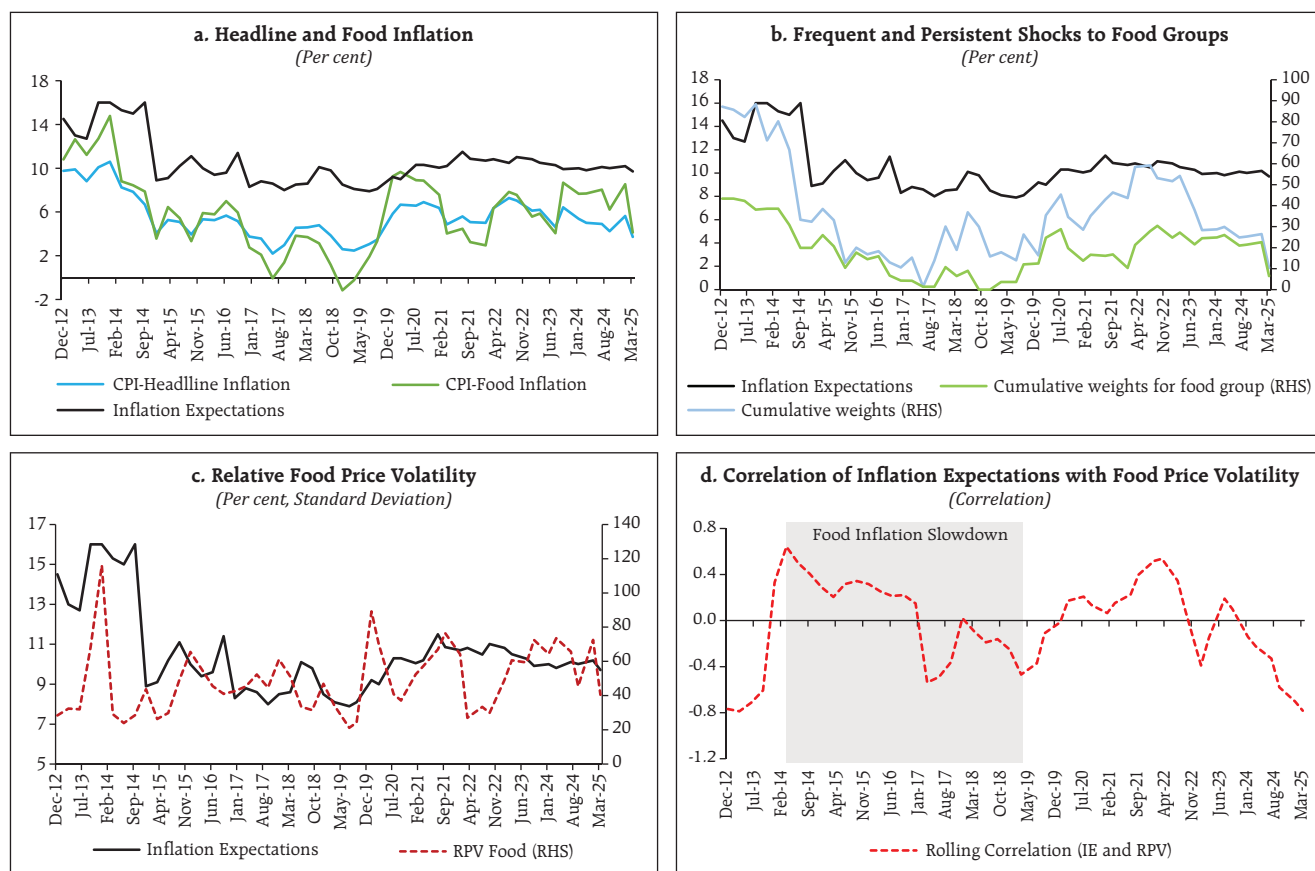
Inflation expectations move more closely with headline rather than food inflation (Chart 4a). During high inflation periods, when food inflation is not a major contributor (between June 2017 to June 2018 in Chart 4b), it can help limit the spike in overall inflation expectations. Conversely, during periods of low headline inflation, higher food inflation can hinder easing of expectations (during 2022-23: Q4 and 2023-24: Q2 in Chart 4b). Conforming to their global counterparts, during periods of high inflation, Indian households focus on volatility rather than merely increase in food prices (Charts 4c and 4d) [Coibion and

Gorodnichenko, 2015; Coibion *et al.*, 2018]. In recent times, as inflationary concerns have moderated since the pandemic, expectations are gradually moderating, *albeit*, remaining above the pre-pandemic levels.

#### 5. Multimodal distribution with expectations rounded to multiples of five

The distribution of median inflation expectations consistently exhibits multiple modes, with many respondents rounding off their expectations between 5 and 10 per cent, in line with global behaviour (Binder, 2015; Reiche and Meyler, 2022; Haidari and Nolan, 2022) [Chart 5]. Since the introduction of the FIT regime, expectations have generally shifted down. Pandemic and the Russia-Ukraine War

**Chart 4: Inflation, Price Volatility and Inflation Expectations**



**Notes:** 1. Cumulative weights refer to weights of CPI basket items with more than 6 per cent inflation.

2. Relative Food Price Volatility (RPV Food) is calculated as weighted standard deviation of food and beverages group items' inflation over headline inflation (Pattanaik *et al.*, 2023).

3. Rolling correlation is calculated for inflation expectations and relative food price volatility, with a 3-year window size.

**Sources:** MOSPI; RBI; and Authors' calculations.

induced disturbances, and resultant uptick in the expectations, have been gradually moderating as observed from lower peaks in the distributions (right tail) after 2022.

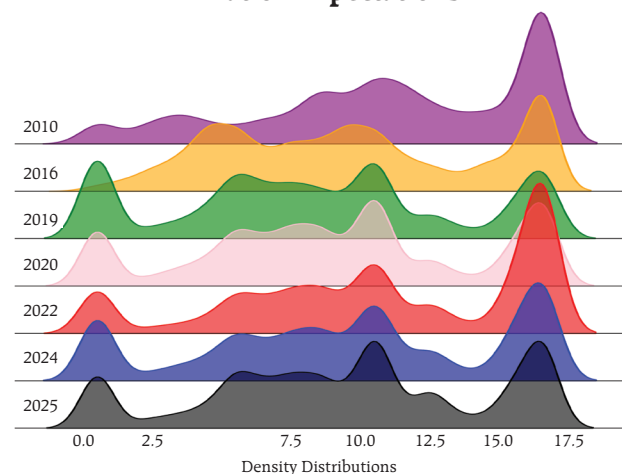
## 6. Leftward shift in distribution post-FIT

Since the transition to the FIT regime, more households report values below 16 per cent, which has led to a corresponding leftward shift of the distribution (Chart 5 and Chart 6). However, shocks since the pandemic and escalated geopolitical tensions shifted the distributions more to the right. Nevertheless, the distributions are gradually moving back to left since 2023-24.

## 7. Reduced uncertainty in FIT regime

The share of responses in ' $\geq 16$  per cent' and 'No Idea' categories are lower during the FIT regime, indicating lower uncertainty among households (Chart 6). However, the pandemic and ensuing higher inflationary pressures led to an increase in the share of higher value response. Since 2021-22, with largely easing inflation, this share has moderated.

**Chart 5: Distributions Showing Multimodality of Inflation Expectations**



**Notes:** 1. Data pertain to unit-level IESH observations for March.  
2. While this holds in general, only selected years are depicted above for clarity. These years reflect pre and post behaviour in relation to the introduction of the FIT regime, and the COVID-19 pandemic.

**Sources:** IESH, RBI; and Authors' calculations.

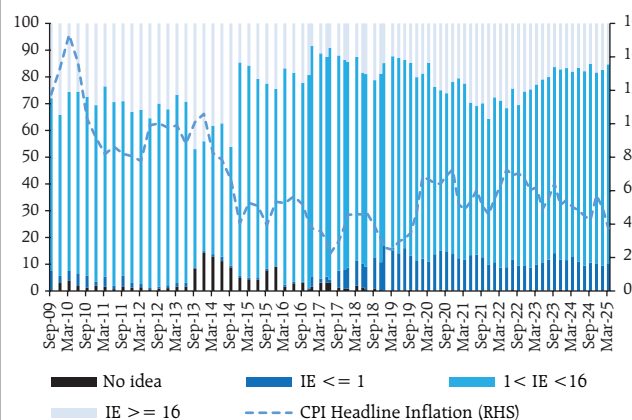
## 8. Improved anchoring of city-wise expectations in FIT regime

City-wise household expectations show a marked decline under the FIT regime, suggesting a broader anchoring of expectations (Chart 7a). Since the onset of the COVID-19 pandemic, expectations have increased compared to the pre-pandemic levels (Chart 7b). Nevertheless, the consistently lower expectations during the FIT regime suggest a perceived credibility in the framework.

## 9. Indian women do not show consistent upward bias; higher expectations from older, and variable income households

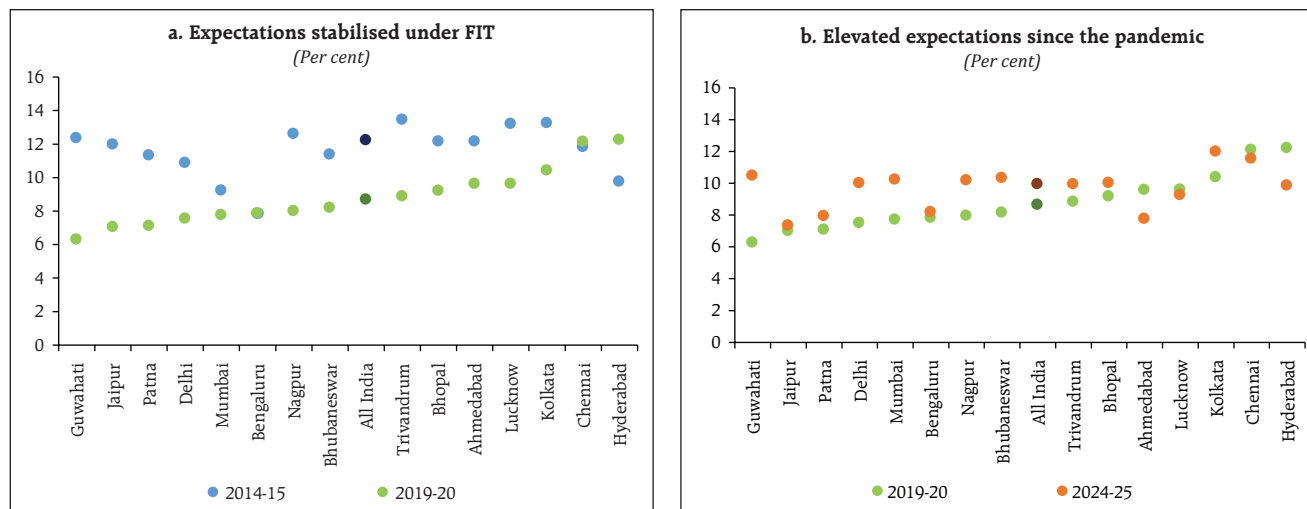
Generally, women consistently exhibit higher inflation expectations influenced by frequent shopping exposure (Jonung, 1981; Bryan and Venkatu, 2001; Coibion *et al.*, 2020; D'Acunto *et al.*, 2024). Indian household inflation expectations, however, do not reflect this sustained upward bias for women (Chart 8a). Older individuals (45 and above) report higher expectations largely reflecting their lifetime experiences (Chart 8b).

**Chart 6: Share of Respondents**  
(Share in per cent, Per cent)



**Notes:** 1. The shaded bars represent the values of inflation expected by households (in per cent).  
2. Reported values of inflation expectations (IE) are grouped as: No idea, inflation expected to be less than or equal to 1 per cent ( $IE \leq 1$ ), between 1 and 16 per cent ( $1 < IE < 16$ ) and greater than or equal to 16 per cent ( $IE \geq 16$ ).

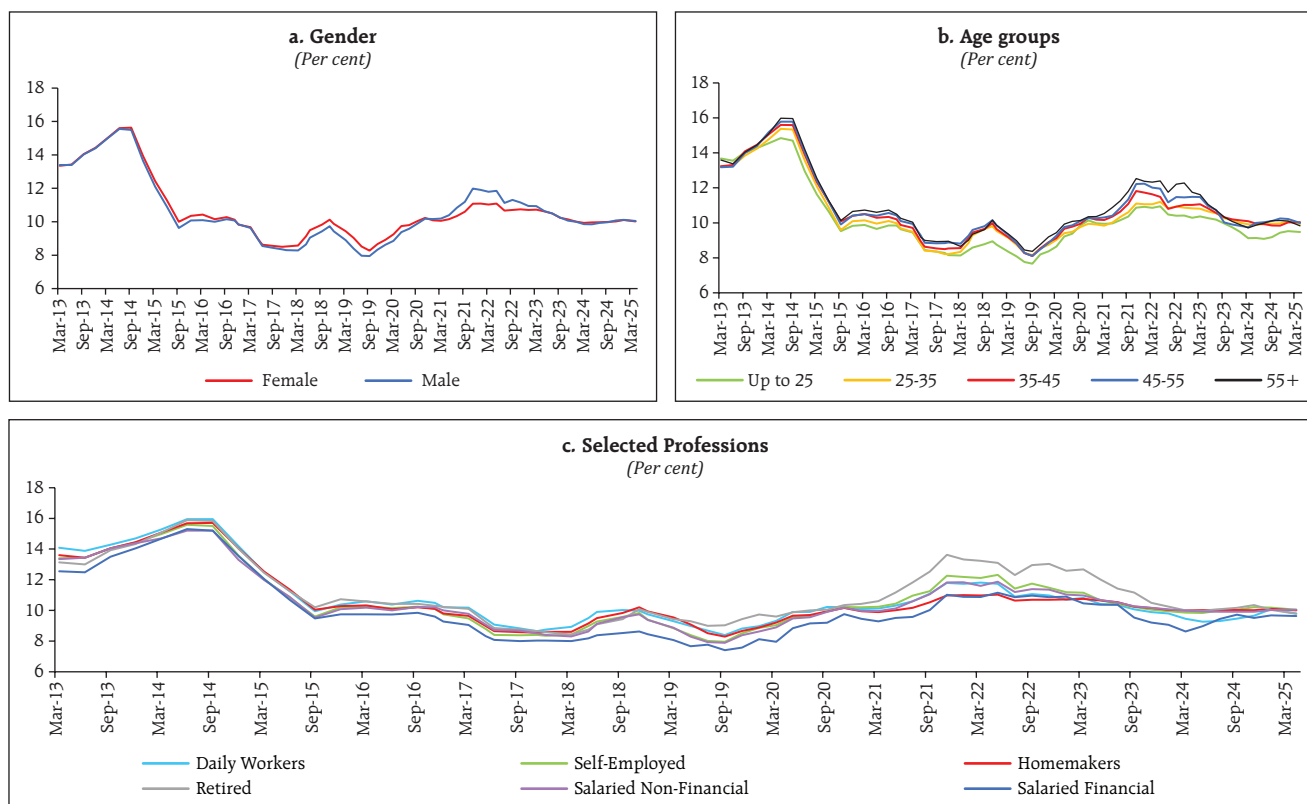
**Sources:** MoSPI; IESH, RBI; and Authors' calculations.

**Chart 7: City-wise Inflation Expectations and the FIT Regime**

**Note:** Data pertain to averages of 1-year ahead median inflation expectations from various rounds in the respective fiscal years. For clarity purpose, data pertaining to 2014-15, 2019-20 and 2024-25 have been shown, but the pattern remains similar across the years.

**Sources:** IESH, RBI; Authors' calculations.

Daily wage earners express relatively greater inflation concerns in the pre-pandemic period than salaried employees, likely influenced by fixed budget and variable income constraints (Chart 8c). While post

**Chart 8: Inflation Expectations across Demographic Groups**

**Notes:** 1. For the reported aggregate series, data on median is available from 2012 onwards.

2. Inflation expectations are represented as one-year moving average.

3. Salaried financial and non-financial refer to financial sector employees and other employees, respectively.

**Sources:** IESH, RBI; and Authors' calculations.



pandemic inflationary pressures led to higher overall expectations, younger individuals, homemakers and salaried professionals seem to have better anchored expectations.

## 10. Disagreement in inflation expectations widens post pandemic

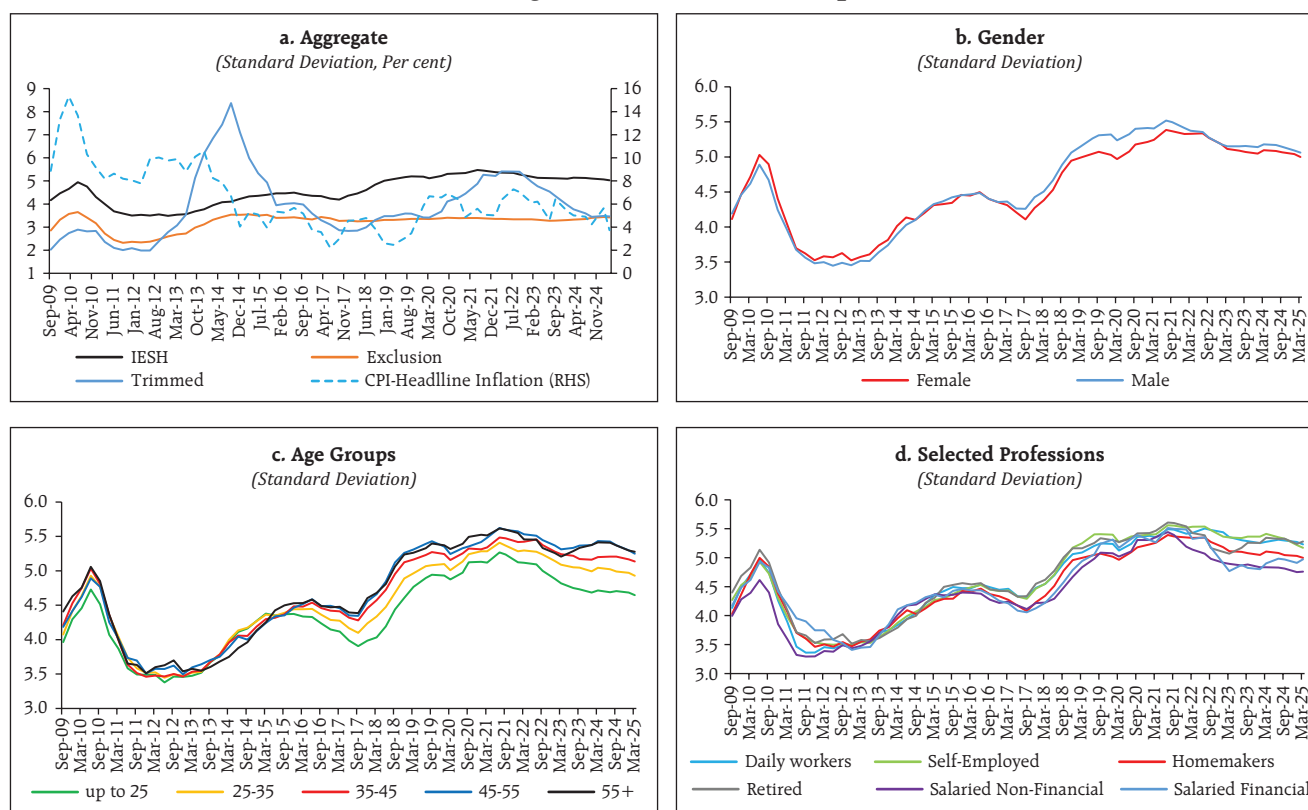
Disagreement in inflation expectations reflects the uncertainty and volatility in responses, particularly during inflationary shocks (Coibion and Gorodnichenko, 2012).<sup>12</sup> The falling disagreement since the transition to the FIT regime was reversed with the rising inflation since 2018-19, followed by the pandemic pressures (Chart 9). At the aggregate level, exclusion and trimmed inflation expectations

show lower disagreement levels than the reported expectations. Across cohorts, generally, male respondents, older individuals (45+; retirees) and households with variable incomes (daily workers, self-employed) exhibit higher disagreement.

## V. Factors influencing household inflation expectations in India: Empirical Results

An important question for policy makers is: what are the main factors influencing household inflation expectations in India? To explore this, we look at 1-year ahead inflation expectations from the IESH along with its possible explanatory variables. As discussed in Sections II to IV, not only key macroeconomic variables, but also the persistence

**Chart 9: Disagreement in Inflation Expectations**



**Notes:** 1. Disagreement is measured as standard deviation of inflation expectations across responses.

2. Disagreement levels are represented as one-year moving averages.

**Sources:** RBI; and Author's calculations

<sup>12</sup> Disagreement in inflation expectations is measured as standard deviation of expectations across agents.

and volatility of food prices are likely to influence households' short-term inflation expectations (up to 1 year). Our sample combines the median short-term inflation expectations from the IESH with quarterly macroeconomic variables and variants of their moments. The data is quarterly, spanning from 2009-10:Q2 to 2024-25:Q4.

To ensure robustness and capture a broader range of respondents' perspectives, we use inflation expectations from (i) the reported IESH series, (ii) a series that excludes extreme values (particularly those exceeding 16 percent) [Exclusion series], and (iii) a series with the top 20<sup>th</sup> percentile trimmed (Trimmed series).<sup>13</sup>

### V.1. Specification

The benchmark model, estimated using Generalised Method of Moments (GMM)<sup>14</sup>, is of the following form. For a given time  $t$ ,

$$\pi_{t+4|t}^e = \alpha + \beta_1 \pi_{(t-1)+4|t-1}^e + \beta_2 \pi_{t-1} + \beta_3 \text{output gap}_{t-2} + \beta_4 \text{effective policy rate}_{t-1} + \beta_5 D_{FIT} + \epsilon_t$$

where,

$\pi_{t+4|t}^e$ : 4-quarters ahead median inflation expectations (per cent), given information at time  $t$ .

$\pi_{(t-1)+4|t-1}^e$ : captures the influence of past inflation expectations;

$\pi_{t-1}$ : headline CPI-C inflation [year-on-year (y-o-y) per cent] to assess the influence of recent inflation dynamics;

<sup>13</sup> Descriptions on the calculations of Exclusion and Trimmed series are provided in Section III.

<sup>14</sup> We employ GMM regression framework to address the endogeneity issue and account for the potential information set of agents, using four consecutive lags of variables as instruments (to restrict the information set of agents to past one year). The GMM estimators can produce efficient and unbiased estimates even in the presence of heteroscedasticity of unknown form. Moreover, GMM maintains its efficiency in over-identified models, where the number of instruments exceeds the number of explanatory variables, provided that the over-identifying restrictions (or instruments) are valid. The Sargan-Hansen J test confirms the validity of these instruments by verifying that they are uncorrelated with the error term (Baum *et al.*, 2003).

$\text{output gap}_{t-2}$ : captures aggregate economic conditions;<sup>15</sup>

$\text{effective policy rate}_{t-1}$ : weighted average call rate (WACR)<sup>16</sup> net of headline CPI-C inflation;

$D_{FIT}$ : dummy variable takes a value 1 for the FIT regime since 2014-15: Q1, and 0 otherwise<sup>17</sup>; and

$\epsilon_t$ : is the error term.

Additionally, to account for supply shocks, we include: (1)  $\text{rainfall}_t$ , the aggregate deviation of rainfall from normal (per cent); (2)  $\text{RPVFood}_{t-1}$ , the relative price volatility (RPV) of food items in the CPI basket;<sup>18,19</sup> (3) Brent crude oil price inflation (y-o-y per cent) in rupee terms ( $\pi_{t-1}^{\text{Brent}}$ ) to capture both global commodity price pressures and domestic logistics factors, which partially reflect exchange rate developments;<sup>20</sup> and (4) liquefied petroleum gas (LPG) price inflation (y-o-y per cent) [ $\pi_{t-1}^{\text{LPG}}$ ] to capture the effects of domestic fuel prices.<sup>21</sup>

For demand-side influences, we use growth in personal loans<sup>22</sup> ( $\text{loan}_t$ ) and alternatively, spread

<sup>15</sup> Output gap is calculated as the log difference of actual and potential GDP as per cent of log potential GDP in real terms. Potential GDP is calculated using Hodrick–Prescott filter. Since the GDP data becomes available with a lag of almost two quarters, is considered at time  $t-2$ .

<sup>16</sup> In India, the effective policy rate has fluctuated between the repo and reverse repo rates, reflecting prevailing liquidity conditions and policy stance. Hence, WACR is used as a proxy (Khundrakpam, 2011; Kapur and Behera, 2012).

<sup>17</sup> The Reserve Bank adopted a glide path towards the FIT regime in January, 2014, following the recommendations of an expert committee. The FIT framework was formally implemented in February 2015. To account for a potential adjustment period, we assume that the FIT regime began in 2014-15: Q1.

<sup>18</sup>  $\text{RPVFood}_{t-1}$  is calculated as weighted standard deviation of food and beverages group items' inflation over headline inflation (Pattanaik *et al.*, 2023).

<sup>19</sup> Estimates using WPI food inflation were found insignificant.

<sup>20</sup> Estimates using Real Effective Exchange Rate (36-currency trade-weighted) [REER] instead of Brent crude oil suggest that exchange rate movements are likely to matter more for informed professionals and businesses rather than households (Annex C Table C2).

<sup>21</sup> LPG prices are calculated as the average of prices for the 19kg cylinder (pre-subsidy) in the four major cities of Delhi, Mumbai, Kolkata, and Chennai. Data for the 14.2kg cylinder is available only from 2014 onwards and is largely incorporated in the CPI already. Results with LPG 19kg cylinder price inflation are provided in Annex C Table C1.

<sup>22</sup> Deflated using headline CPI-C index.

between the weighted average lending rate (WALR) on fresh rupee loans and the WACR (*spread<sub>t</sub>*), indicating credit availability and cost of borrowed funds, respectively. These variables are combined to complement our benchmark models and facilitate robustness checks.<sup>23</sup> Data sources include RBI; MoSPI; CEIC; Indian Oil Corporation Ltd. (IOCL); and U.S. Energy Information Administration (EIA).<sup>24</sup>

V.2. Results

The following section discusses the results based on a combination of models on Reported, Exclusion and Trimmed series of expectations (Tables 1-2, Annex C). Exclusion and Trimmed series are also referred to as adjusted series.

**a) Behavioural factors - priors and perceptions of inflations:** The magnitude of persistence of inflation expectations ( $\pi_{t-1}^e$ ) is nearly halved as we move from the reported to adjusted series. A percentage point increase in past expectations boosts household expectations by about 46-72 basis points (bps)<sup>25</sup> in case of the reported series, while it wanes to around 17-49 bps for the adjusted series.

**b) Past inflation dynamics: rational inattention?** A percentage point increase in past inflation drives adjusted inflation expectations by up to 11-39 bps. By adjusting for extreme values, we find that influence of realised inflation dynamics increases, while that of past inflation expectations generally decreases.

**c) Domestic economic conditions:** The output gap has a positive impact on adjusted inflation expectations, suggesting that households revise their inflation expectations upward as the economy's

Table 1: Benchmark Model: Median Inflation Expectations			
Sample period: 2009-10: Q2 – 2024-25: Q4	Dependent variable: 1-year ahead expectation ( $\pi_{t+4 t}^e$ )		
Independent variables:	Reported	Exclusion	Trimmed
	(1)	(2)	(3)
Constant	3.918*** (1.571)	4.220*** (0.878)	5.879*** (1.031)
$\pi_{(t-1)+4 t-1}^e$	0.534*** (0.152)	0.494*** (0.069)	0.263** (0.102)
$\pi_{t-1}$	0.276 (0.161)	0.135*** (0.035)	0.291** (0.110)
$wacr_{t-1}$	-0.067 (0.090)	-0.143*** (0.031)	-0.045*** (0.041)
$output\ gap_{t-2}$	0.061 (0.055)	0.081*** (0.010)	0.065*** (0.016)
$D_{FIT}$	-0.778* (0.420)	-0.145** (0.214)	-0.296** (0.331)
Adjusted-R <sup>2</sup>	0.702	0.715	0.636
J-statistic	5.952	10.825	10.020
Prob (J-statistic)	0.745	0.820	0.865
DW-statistic	2.493	2.459	2.221
Long-run impact			
Constant	8.408	8.340	7.977
$\pi_{t-1}$	0.592	0.267	0.395
$wacr_{t-1}$	-0.144	-0.283	-0.061

**Notes:** 1. Instrumental variables used include instruments for:  $\pi_{t-1}^e$  (1 to 2 lags);  $\pi_{t-1}$  and  $wacr_{t-1}$  (1 to 4 lags);  $output\ gap_{t-2}$  (1 to 5 lags).  
2. Figures in parentheses indicate standard errors.  
3. \*, \*\*, \*\*\* denote significance levels at 10, 5 and 1 per cent, respectively.

aggregate demand conditions improve. The reported series caps all higher expectations at 16.5 per cent, likely limiting the ability of macroeconomic determinants to influence inflation expectations.

**d) Monetary policy actions, communications and framework:** The effective policy rate has a significant negative impact on adjusted inflation expectations. Further, transition to the FIT regime has generally led to lower inflation expectations, ranging from 0.15 to 2.5 percentage points decline, suggestive of better anchoring of expectations by monetary policy. However, this period also witnessed timely fiscal measures like export bans by the government, and largely lower global inflationary pressures during

<sup>23</sup> For detailed results for both 3-months and 1-year ahead expectations, please refer to Ruhi *et al.*, 2026 (mimeo).  
<sup>24</sup> Summary statistics of the variables are presented in Annex B Table B1.  
<sup>25</sup> A basis point is one-hundredth of a percentage point.

2014-20, even though households may have limited awareness of specific policy measures.<sup>26</sup>

**e) Supply shocks:** Both abnormal rainfall and higher volatility of food prices tend to independently

elevate household inflation expectations in some of the models. But their combined occurrence affects these expectations significantly in all cases, *albeit* with a small positive magnitude (Table 2). This

**Table 2: Models with supply and demand shocks**

Sample period: 2009-10: Q2 – 2024-25: Q4	Dependent variable: 1-year ahead expectation ( $\pi_{t+4 t}^e$ )					
Independent variables:	Reported		Exclusion		Trimmed	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Constant</i>	5.808*** (1.752)	6.219** (2.595)	4.273*** (0.669)	7.709*** (0.923)	5.630*** (0.547)	9.382*** (1.705)
$\pi_{(t-1)+4 t-1}^e$	0.666*** (0.146)	0.457*** (0.124)	0.405*** (0.089)	0.345*** (0.055)	0.370*** (0.041)	0.321*** (0.073)
$\pi_{t-1}$	0.048 (0.286)	0.019** (0.178)	0.159** (0.067)	0.248*** (0.065)	0.265*** (0.035)	0.247*** (0.048)
$wacr_{t-1}$	-0.140 (0.162)	-0.115 (0.124)	-0.100*** (0.036)	-0.240*** (0.033)	-0.142*** (0.021)	-0.276*** (0.062)
<i>output gap</i> <sub>t-2</sub>	0.045 (0.030)	0.039 (0.035)	0.052*** (0.009)	0.036*** (0.008)	0.056*** (0.009)	0.046** (0.021)
$D_{FIT}$	-2.092** (0.973)	-2.460*** (0.860)	-0.825*** (0.670)	-0.481*** (0.286)	-1.139*** (0.226)	-1.991*** (0.356)
<i>rainfall</i> <sub>t</sub>	0.009** (0.004)	0.007 (0.006)	0.006*** (0.002)	0.008* (0.003)	0.009*** (0.003)	0.009** (0.004)
$RPVFood_{t-1}$	0.009 (0.007)	0.002 (0.005)	0.007*** (0.002)	0.001 (0.003)	0.004* (0.003)	0.003 (0.003)
<i>rainfall</i> <sub>t</sub> * $RPVFood_{t-1}$	0.001* (0.000)	0.001* (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001** (0.002)	0.002* (0.000)
$\pi_{t-1}^{Brent}$	0.004** (0.003)	0.001 (0.000)	0.001* (0.001)	0.003** (0.001)	0.001 (0.001)	0.001* (0.001)
<i>loan</i> <sub>t</sub>	0.014 (0.031)		0.015* (0.010)		0.003* (0.009)	
<i>spread</i> <sub>t</sub>		-0.094 (0.188)		-0.346*** (0.061)		-0.450* (0.219)
Adjusted-R <sup>2</sup>	0.530	0.689	0.480	0.416	0.664	0.62
J-statistic	10.202	9.953	12.189	11.064	11.531	10.266
Prob (J-statistic)	0.807	0.823	0.967	0.983	0.994	0.946
DW-statistic	2.635	2.456	2.433	2.392	2.610	2.620
Long-run impact						
<i>Constant</i>	17.389	11.453	7.182	11.769	8.937	13.817
$\pi_{t-1}$	0.144	0.035	0.267	0.379	0.421	0.364
$wacr_{t-1}$	-0.419	-0.212	-0.168	-0.366	-0.225	-0.406

**Notes:** 1. Instrumental variables used include instruments for:  $\pi_{t-1}^e$  (1 to 2 lags);  $\pi_{t-1}$ ,  $wacr_{t-1}$  and  $RPVFood_{t-1}$  (1 to 4 lags); *output gap*<sub>t-2</sub> (1 to 5 lags);  $\pi_{t-1}^{LPG}$  and *loan*<sub>t</sub> (1 to 3 lags);  $\pi_{t-1}^{Brent}$  and *spread*<sub>t</sub> (1 to 2 lags).  
2. Figures in parentheses indicate standard errors.  
3. \*, \*\*, \*\*\* denote significance levels at 10, 5 and 1 per cent, respectively.

<sup>26</sup> The IESH does not capture information on households' awareness about the Reserve Bank, its monetary policy functioning, cognitive abilities, or exposure to media and social interactions related to policy or inflation dynamics. While the questionnaire includes questions about education, this data is not publicly available.

suggests that while food volatility itself may not be a major concern, it can significantly impact inflation expectations during excess rainfall periods or *vice versa*.<sup>27, 28</sup>

In line with the stylised facts 3 and 4, and given the significant weight of food in the CPI basket (45.86 per cent), the RBI should continue to consider food price dynamics in its monetary policy to balance social welfare and economic objectives.<sup>29</sup> Oil prices generally have small significant positive effect, suggesting sensitivity of expectations to oil price changes (Table 2; Annex C).

**f) Demand shocks:** Do easier access to credit or lower loan interest rates influence expectations? We find that personal loan growth generally has a positive and significant effect on adjusted inflation expectations (Table 2). The spread between WALR and WACR has a negative effect on adjusted expectations, indicating households associate higher credit costs with weaker demand and lower future inflation.

**g) Long-run impact:** Both past realised inflation and policy rate exert stronger long-term influence on household inflation expectations. While households may rely on personal perceptions and economic conditions in the short term, they give greater weight to inflation history (life experiences) and monetary policy in the long-term, highlighting the critical role of monetary policy in anchoring inflation expectations.

## VI. Conclusion

This study analyses Indian household inflation expectations, revealing that they remain elevated compared to those of professionals, even during periods of price stability. Demographic factors such

as gender, age, and professional background play significant roles. Notably, men, older individuals (45 and above), self-employed and daily workers, who often operate on variable incomes, exhibit higher inflation expectations. In contrast, younger and salaried individuals show less disagreement and are more attuned to realised inflation dynamics, likely reflecting their exposure to financial and social network.

Transition to the FIT regime, along with timely fiscal interventions such as export bans and lower import duties, and moderating inflation levels have contributed to decline in both the levels of expectations and disagreement across responses. However, supply shocks and global inflation shocks induced by the pandemic and geopolitical tensions have elevated the inflation expectations, particularly across headline, food and housing categories. High food inflation during periods of high inflation may keep the expectations elevated, even as headline matters more for inflation expectations. Nonetheless, most recently, as inflation has been showing signs of easing, expectations of households have also come down.

Empirically, macroeconomic shocks, especially volatility of food price, play a prominent role in influencing short-term (up to 1-year ahead) household expectations, especially during adverse weather conditions. Consistent with global findings, these results emphasise the importance of targeting headline inflation to effectively manage expectations and improve social welfare.<sup>30</sup> Nevertheless, the impact of monetary policy is significant even when we include higher values of expectations in trimmed series. The transition to the FIT regime has aided in anchoring inflation expectations.

<sup>27</sup> Goyal and Parab (2021), De Pooter *et al.* (2014), Armantier *et al.* (2016).

<sup>28</sup> This result holds even for the pre-Covid pandemic period till 2019-20 [Rui *et al.*, 2026 (mimeo)].

<sup>29</sup> Patra and Ray (2010); Pattanaik *et al.* (2019); Eichengreen and Gupta (2024).

<sup>30</sup> D'Acunto *et al.* (2024) argue that central banks should focus more on overall inflation rather than just core inflation since consumers tend to base their inflation expectations relatively more on prices of frequently purchased items.



Given the evidence of non-rationality and heterogeneity across different groups of households – each reflecting their systematic biases – the role of monetary policy becomes critical in managing inflation expectations. This, in turn, underscores the challenges of effective policy communication, making it essential to understand how these expectations are shaped and managed. The study also emphasises the need for further refinement in inflation surveys and adjustment techniques to capture the dynamics of household inflation expectations more accurately.

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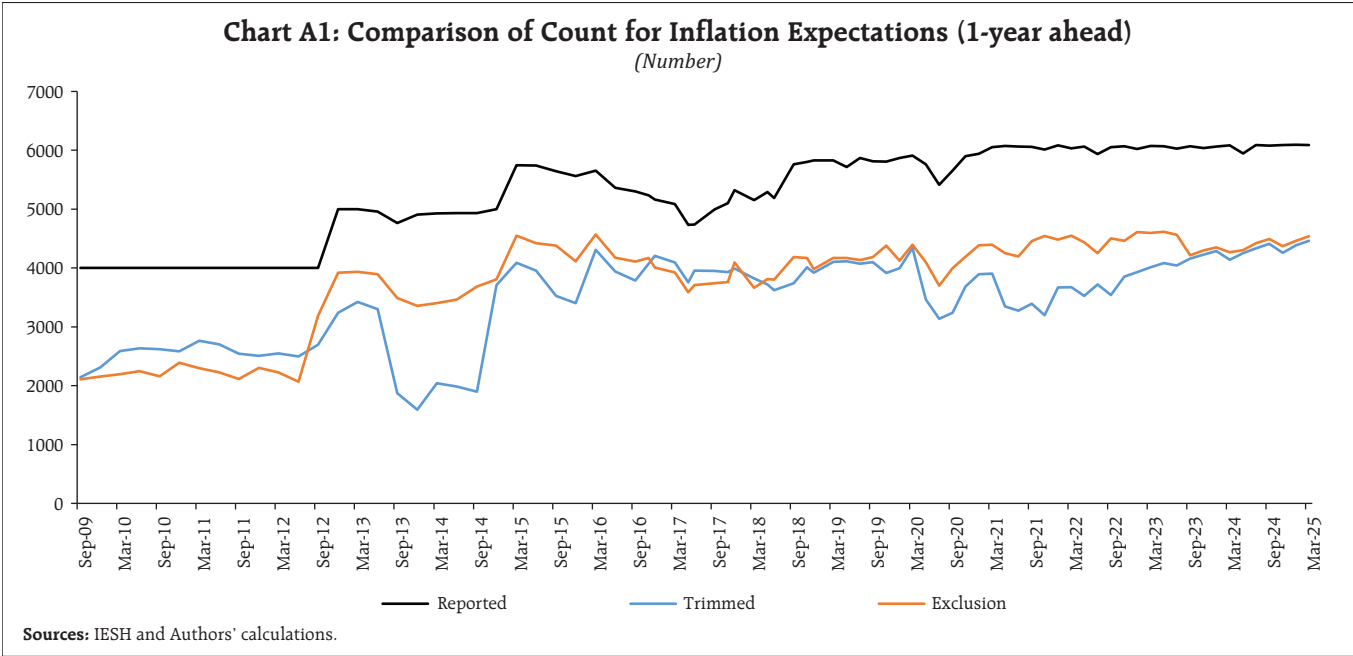
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Annexure A: Adjustment Details

The number of respondents in the unit-level IESH data after adjusting for extreme values is presented in Chart A1.



Annexure B: Summary Statistics

Unit level observations can have a maximum value of 16.5 per cent in reported series. On the other hand, the maximum of unit-level observations in trimmed series can take values higher than 16.5 as well. However, at the aggregate level, the median of the unit-level values of adjusted series (exclusion and trimmed) is found to be lower than that of reported series (Table B1).

Table B1: Summary Statistics							
(Period: 2009-10: Q2 to 2024-25: Q4)							
S. No.	Variables (in per cent)	No. of Obs	Mean	Median	Min	Max	Standard Deviations
1.	Inflation Expectations (1-year ahead)						
	(i) Reported	63	10.96	10.30	5.50	16.50	2.17
	(ii) Exclusion	63	9.75	9.50	6.50	12.50	1.36
	(iii) Trimmed	63	10.04	9.50	5.50	14.50	1.75
2.	Output Gap	63	0.03	0.18	-22.55	4.29	3.66
3.	WACR	63	6.18	6.42	3.11	9.27	1.67
4.	CPI Headline Inflation	63	6.52	5.83	2.20	15.32	2.74
5.	Rainfall Deviation	63	8.98	6.85	-92.73	214.31	58.81
6.	RPV Food (in standard deviation)	53	48.88	45.52	21.18	116.13	19.04
7.	Brent Crude Oil Price Inflation	63	7.25	0.55	-56.98	132.27	36.44
8.	LPG 19kg Price Inflation	63	6.41	6.64	-36.35	57.11	20.81
9.	Real Personal Loan Growth	63	9.00	9.73	-12.15	22.18	6.91
10.	Spread (WALR-WACR)	49	3.66	3.64	2.66	4.98	0.65

Source: Authors' calculations.



## Annexure C: Robustness Results

## Results with supply shocks:

To the benchmark models, when we add supply shocks, primarily rainfall, food volatility and oil price inflation, the results continue to hold (Table C1). The effect of past realised inflation and monetary policy actions is stronger and significant once we adjust for extreme values. The adoption of FIT regime has successfully brought down the inflation expectations. Food price volatility, combined with rainfall puts an upward pressure on these expectations, *albeit* with a small magnitude. Oil price inflation, both in terms of LPG 19 kg cylinder and Brent crude oil, has a positive significant impact on adjusted inflation expectations.

Table C1: Models with supply shocks

Dependent variable: 1-year ahead expectation ( $\pi_{t+4|t}^e$ )

Sample period: 2009-10: Q2 – 2024-25: Q4

Independent variables:	Reported			Exclusion			Trimmed		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Constant</i>	5.269*** (1.792)	4.708*** (0.984)	2.716* (1.355)	4.372** (1.634)	5.931*** (0.661)	4.853*** (0.453)	7.304*** (1.257)	6.770*** (1.235)	5.300*** (0.704)
$\pi_{(t-1)+4 t-1}^e$	0.619*** (0.206)	0.706*** (0.096)	0.675*** (0.182)	0.424** (0.175)	0.409*** (0.063)	0.369*** (0.048)	0.214** (0.104)	0.209* (0.076)	0.275*** (0.053)
$\pi_{t-1}$	0.044 (0.287)	0.003 (0.140)	0.174 (0.289)	0.114*** (0.110)	0.140** (0.047)	0.162*** (0.053)	0.276*** (0.048)	0.295*** (0.067)	0.261*** (0.045)
$wacr_{t-1}$	-0.123 (0.121)	-0.135 (0.080)	-0.178 (0.158)	-0.146*** (0.051)	-0.200*** (.031)	-0.119*** (0.038)	-0.135*** (0.033)	-0.197*** (0.049)	-0.150*** (0.019)
<i>output gap</i> <sub>t-2</sub>	0.039 (0.055)	0.046* (0.036)	0.113** (0.043)	0.107** (0.042)	0.058*** (0.009)	0.079*** (0.010)	0.055*** (0.014)	0.037** (0.017)	0.058*** (0.014)
$D_{FIT}$	-1.363* (0.478)	-1.428*** (0.511)	-0.455 (0.653)	-0.566** (0.432)	-0.638*** (0.218)	-0.365*** (0.190)	-1.470*** (0.415)	-1.028*** (0.476)	-1.283*** (0.291)
<i>rainfall</i> <sub>t</sub>	0.001 (0.001)	0.014* (0.006)	0.007* (0.006)	0.008* (0.005)	0.002 (0.001)	0.007*** (0.001)	0.005 (0.003)	0.001 (0.001)	0.010*** (0.003)
$RPVFood_{t-1}$	0.010 (0.008)	0.006 (0.004)	0.003 (0.007)	0.003* (0.006)	0.004* (0.001)	0.004 (0.003)	0.016* (0.002)	0.003 (0.002)	0.005 (0.004)
$rainfall_t * RPVFood_{t-1}$	0.001** (0.001)	0.001* (0.000)	0.001 (0.000)	0.001** (0.000)	0.001** (0.000)	0.004*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.0001*** (0.000)
$\pi_{t-1}^{LPG}$		0.005** (0.004)			0.003** (0.002)			0.008** (0.003)	
$\pi_{t-1}^{Brent}$			0.004* (0.003)			0.003*** (0.001)			0.001* (0.001)
Adjusted-R <sup>2</sup>	0.604	0.631	0.606	0.520	0.593	0.520	0.671	0.665	0.660
J-statistic	6.710	7.694	5.114	8.650	11.402	10.178	9.048	10.976	8.805
Prob (J-statistic)	0.752	0.809	0.883	0.800	0.935	0.896	0.828	0.963	0.946
DW-statistic	2.395	2.697	2.475	2.199	2.32	2.330	2.598	2.620	2.721
Long-run impact									
<i>Constant</i>	13.829	16.014	8.357	7.590	10.036	7.691	9.293	8.559	13.829
$\pi_{t-1}$	0.115	0.010	0.535	0.198	0.237	0.257	0.351	0.373	0.115
$wacr_{t-1}$	-0.323	-0.459	-0.548	-0.253	-0.338	-0.189	-0.172	-0.249	-0.323

**Notes:** 1. Instrumental variables used include instruments for:  $\pi_{t-1}^e$  (1 to 2 lags);  $\pi_{t-1}$ ,  $wacr_{t-1}$  and  $RPVFood_{t-1}$  (1 to 4 lags); *output gap*<sub>t-2</sub> (1 to 5 lags);  $\pi_{t-1}^{LPG}$  (1 to 3 lags);  $\pi_{t-1}^{Brent}$  (1 to 2 lags).

2. Figures in parentheses indicate standard errors.

3. \*, \*\*, \*\*\* denote significance levels at 10, 5 and 1 per cent, respectively.

**Results with REER:**

Comparing the effect of REER on various agents' expectations, we see that REER is significant in case of professional (SPF) and businesses' (BIES) forecasts (Table C2).

**Table C2: Models with Professional Forecasts and REER**Dependent variable: 1-year ahead median inflation expectations ( $\pi_{t+4|t}^e$ )

Sample period: 2017-18: Q3 – 2024-25: Q4

Inflation expectations from:	SPF	BIES	IESH	
			Reported	Trimmed
Independent variables:	(1)	(2)	(3)	(4)
<i>Constant</i>	2.457*** (0.283)	2.395*** (0.386)	5.144*** (0.540)	7.415*** (0.468)
$\pi_{(t-1)+4 t-1}^e$	0.607*** (0.030)	0.716*** (0.071)	0.373*** (0.045)	0.166*** (0.051)
$\pi_{t-1}$	0.130*** (0.043)	0.207*** (0.040)	0.205*** (0.055)	0.233*** (0.038)
$wacr_{t-1}$	-0.063** (0.023)	-0.120** (0.042)	-0.090*** (0.028)	-0.231*** (0.019)
<i>output gap</i> $_{t-2}$	0.037*** (0.002)	0.014* (0.007)	0.025** (0.028)	0.027*** (0.008)
$REER_t$	0.029** (0.015)	0.040** (0.014)	0.028 (0.019)	-0.019 (0.013)
Adjusted-R <sup>2</sup>	0.580	0.503	0.490	0.833
J-statistic	7.382	7.465	7.221	7.791
Prob (J-statistic)	0.946	0.825	0.926	0.900
DW-statistic	2.539	2.181	2.567	1.921
Long-run impact				
<i>Constant</i>	6.252	8.433	8.204	8.891
$\pi_{t-1}$	0.331	0.729	0.327	0.279
$wacr_{t-1}$	-0.160	-0.423	-0.144	-0.277

**Notes:** 1. SPF denotes 3-quarters ahead inflation expectations; BIES, Reported and Trimmed denotes 1-year ahead Inflation expectations. Reported refers to published series of IESH inflation expectations, while trimmed is the aggregated series of unit-level observations from IESH calculated after trimming (as explained in Section III).

2. Instrumental variables used include instruments for:  $\pi_{t-1}^e$  (1 to 2 lags);  $\pi_{t-1}$ ,  $wacr_{t-1}$  and  $REER_t$  (1 to 4 lags); *output gap* $_{t-2}$  (1 to 5 lags).

3. Figures in parentheses indicate standard errors.

4. \*, \*\*, \*\*\* denote significance levels at 10, 5 and 1 per cent, respectively.