

# Prices and Inflation

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*As economic activity started showing signs of picking-up in the second year of the pandemic, the global economy faced the fresh challenge of rising global inflation. COVID-19 related stimulus spending in major economies along with pent-up demand boosting consumer spending pushed inflation up in many advanced and emerging economies. The surge in energy, food, non-food commodities, and input prices, supply constraints, disruption of global supply chains, and rising freight costs across the globe stoked global inflation during the year. Crude oil prices also witnessed an upswing during the year on the back of increased demand from recovering economies and supply restrictions by the Organization of the Petroleum Exporting Countries and its allies (OPEC+).*

*On the domestic front, the average headline Consumer Price Index-Combined (CPI-C) inflation in India moderated to 5.2 per cent in 2021-22 (April-December) from 6.6 per cent in the corresponding period of 2020-21 and was recorded at 5.6 per cent in December 2021. The Consumer Price Index inflation remained range bound as food prices eased considerably due to the supply management response by the Government. Food inflation remained benign during the year at 2.9 per cent (April-December) as against 9.1 per cent in the corresponding period last year. In the case of vegetables, prices of onions and potatoes remained under control, though retail prices of tomatoes witnessed an uptick during September to November 2021 due to untimely rains in major producing states. However, with fresh arrivals in the market in December, retail prices of tomatoes too, are showing signs of easing. While seasonality plays a significant role in the case of vegetables, random shocks like untimely rains also have an impact on their availability and prices. A strong network of cold storage chains well supported by effective transport infrastructure is needed to stabilize the prices of such perishable commodities. Effective supply-side management kept prices of most essential commodities under control during the year. Proactive measures were taken to contain the price rise in pulses and edible oils that reported high inflation reflecting the impact of imported inflation in these commodities. Reduction in central excise and subsequent cuts in VAT by most States has also helped ease petrol and diesel prices.*

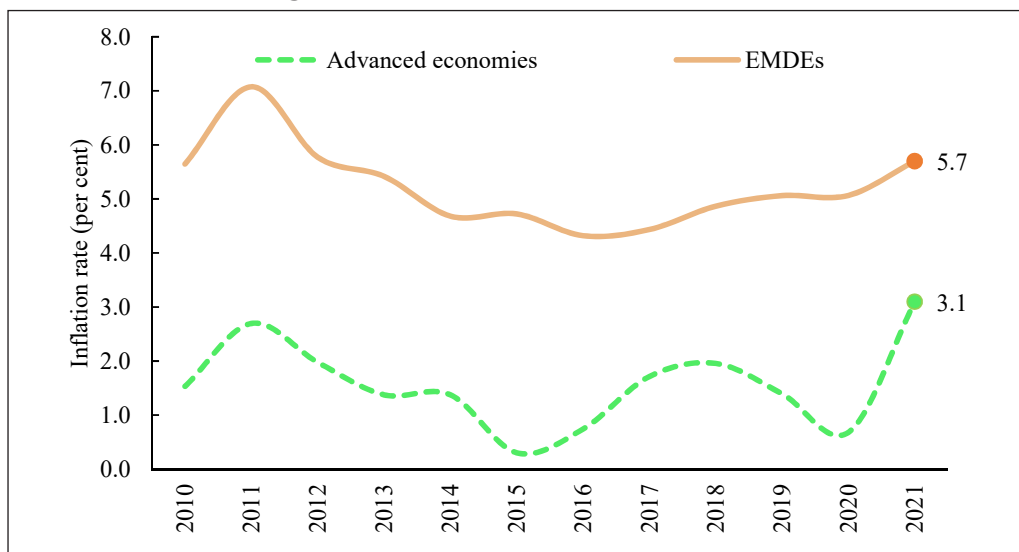
*Wholesale inflation based on Wholesale Price Index (WPI), after remaining very benign during the previous financial year on account of pandemic induced weakening of economic activity, record low global crude oil prices and weak demand, witnessed a sharp uptick, rising to 12.5 per cent during 2021-22 (April-December). This was attributable to the pick-up in economic activity, sharp increase in international prices of crude oil and other imported inputs, and high freight costs. The consequent divergence between*

*CPI-C and WPI inflation during the year remained a subject of debate. This divergence can be explained by factors such as variations due to base effect, difference in scope and coverage of the two indices, their price collections, items covered and difference in commodity weights. Further, WPI is more sensitive to cost-push inflation led by imported inputs. With the gradual waning of base effect in WPI, the divergence in CPI-C inflation and WPI inflation is also expected to narrow down.*

## GLOBAL INFLATION

5.1 In 2021, inflation picked up globally as economic activity revived with opening-up of economies. COVID-19 related stimulus spending, mainly in the form of discretionary handouts to households in major economies, along with pent up demand fueling consumer spending, pushed inflation up in both advanced and emerging economies. In the advanced economies, inflation has increased from 0.7 per cent in 2020 to around 3.1 per cent in 2021 (Figure 1) (IMF, 2022). The surge in energy, food, non-food commodities, and input prices, supply constraints, disruption of global supply chains, and rising freight costs across the globe stoked global inflation during the year. Crude oil prices also witnessed an upswing during the year on the back of increased demand from recovering economies and supply cuts by the Organization of the Petroleum Exporting Countries and its allies (OPEC+).

**Figure 1: Consumer Price Inflation Rates**



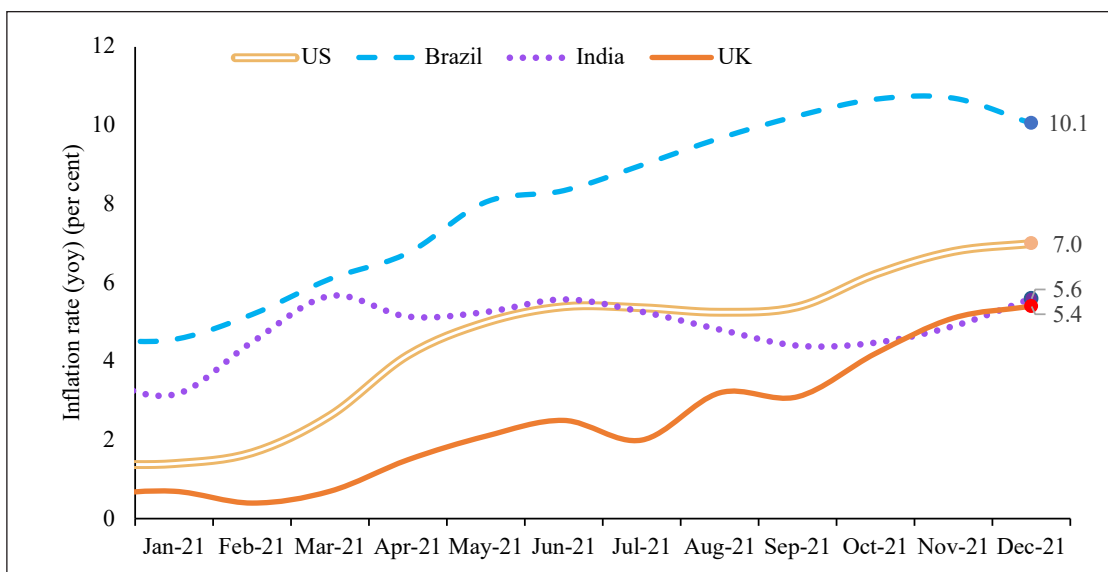
Source: World Economic Outlook, January 2022 Update, IMF

Note: The figure are annual averages.

Advanced Economies include 40 economies and Emerging Markets and Developing Economies (EMDEs) include 156 economies as per IMF classification

5.2 However, in comparison to many Emerging Markets and Developing Economies (EMDEs) and advanced economies, consumer price inflation in India remained range bound in the recent months, touching 4.9 per cent in November 2021 and 5.6 per cent in December 2021, owing to the proactive steps taken by the Government for effective supply management. As against this, inflation in USA touched 7.0 per cent in December 2021, the highest since 1982, driven largely by second hand vehicles and energy. While in the UK it hit a nearly 30 years high of 5.4 per cent in December 2021 mainly on account of rising food prices. Among emerging markets, Brazil witnessed high and rising inflation during 2021 which touched 10.1 per cent in December 2021 (Figure 2). Inflation in Turkey has been in double digits, reaching 36.1 per cent in December 2021. Argentina has witnessed inflation rates above 50 per cent during the last six months.

**Figure 2: Consumer Price Inflation in select countries**



Source: Organisation for Economic Co-operation and Development; Office for National Statistics, UK

## DOMESTIC INFLATION

5.3 Retail inflation, as measured by Consumer Price Index-Combined (CPI-C) inflation, in India, which was slightly above 6 per cent in 2020-21 owing to supply chain disruptions caused by COVID-19 restrictions, lockdowns, and night curfews, moderated during the current financial year. Retail inflation during 2021-22 (April-December) stood at 5.2 per cent (Table 1). Wholesale inflation, based on Wholesale Price Index (WPI), after remaining benign during the previous financial years, saw a sharp uptick during 2021-22 (April-December). A part of the observed rise in wholesale inflation could be attributed to the low base in the previous year. However, rising input costs and global commodity prices also contributed to the rise in wholesale prices.

**Table 1. General inflation based on different price indices (in per cent)**

Indices	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2020-21 <sup>^</sup>	2021-22 <sup>*</sup>
WPI	-3.7	1.7	3.0	4.3	1.7	1.3	0.0	12.5
<b>CPI - C (Headline Inflation)</b>	4.9	4.5	3.6	3.4	4.8	6.2	6.6	5.2
CPI – IW <sup>#</sup>	5.6	4.2	2.9	5.6	7.3	5.2	5.2	5.0
CPI - AL	4.4	4.2	2.2	2.1	8.0	5.5	7.0	3.2
CPI - RL	4.6	4.2	2.3	2.2	7.7	5.5	6.8	3.5

Source: Office of the Economic Adviser, Department for Promotion of Industry, and Internal Trade (DPIIT) for WPI, National Statistical Office (NSO) for CPI-C and Labour Bureau for CPI-IW, CPI-AL and CPI-RL.

Notes: #CPI-IW inflation for 2020-21 onwards is based on new series 2016=100; (P) - Provisional; C stands for Combined, IW stands for Industrial Workers, AL stands for Agricultural Labourers and RL stands for Rural Labourers. \*2021-22 (April to December) and CPI-IW, CPI-AL, RL (April to November)

<sup>^</sup>2020-21 (April to December) and CPI-IW, CPI-AL, RL (April to November)

## CURRENT TRENDS IN INFLATION AND ITS DRIVERS

### Recent Trends in Retail Inflation

5.4 The average retail inflation which was 4.8 per cent in 2019-20, inched up to 6.2 per cent in 2020-21, on account of COVID-19 related supply chain disruptions and stalled economic activity due to lockdown. Since July 2021, retail inflation is well within the tolerance band of targeted limit of 4 per cent +/- 2 percentage points set by the Government for the period April 1, 2021- March 31, 2026 (Table 2). Average retail inflation in 2021-22 (April-December) has declined to 5.2 per cent as against 6.6 per cent during April-December 2020-21.

5.5 In 2021-22, the decline in retail inflation was led by easing of food inflation. Food inflation, as measured by the Consumer Food Price Index (CFPI), averaged at a low of 2.9 per cent in 2021-22 (April to December), as against 9.1 per cent in the corresponding period last year. Food inflation declined between July and September 2021. Though edging up, it increased to 4.0 per cent in December 2021.

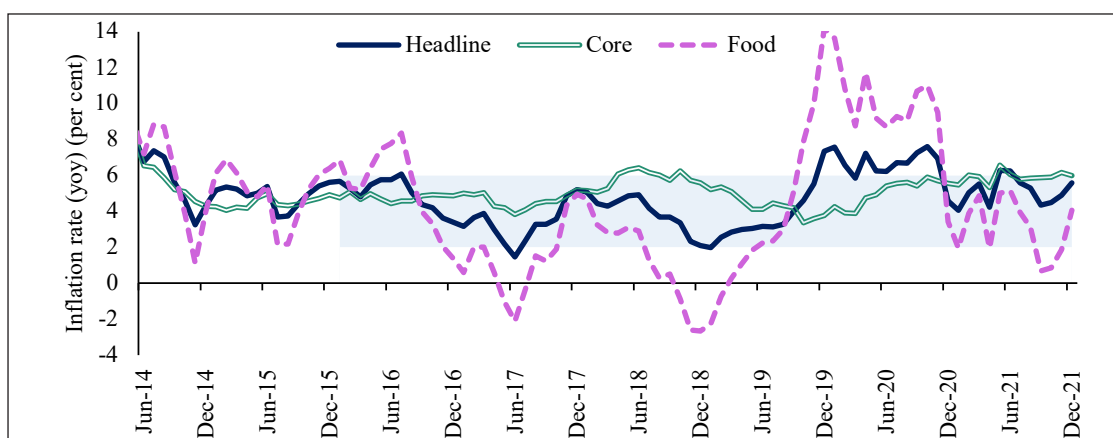
5.6 During the current financial year, retail core inflation (inflation excluding 'food and beverages' and 'fuel and light' – the transitory components of the index) has shown a rising trend. Average core inflation for the period April-December 2021 stood at 5.9 per cent as against 5.4 per cent in corresponding period last year, and remained below 6 per cent during most months. (Figure 3).

**Table 2: Inflation in selected groups of CPI-Base 2012 (in per cent)**

Description	Weights	2019-20	2020-21	2020-21 <sup>^</sup>	2021-22 <sup>#</sup>	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21(P)
All Groups	100	4.8	6.2	6.6	5.2	4.2	6.3	6.3	5.6	5.3	4.3	4.5	4.9	5.6
CFPI*	39.1	6.7	7.7	9.1	2.9	2.0	5.0	5.1	4.0	3.1	0.7	0.8	1.9	4.0
Food & beverages	45.9	6.0	7.3	8.4	3.5	2.6	5.2	5.6	4.5	3.7	1.6	1.8	2.6	4.5
Cereals & products	9.7	2.8	3.8	5.2	-0.6	-3.0	-1.4	-1.9	-1.7	-1.4	-0.6	0.4	1.5	2.6
Meat & fish	3.6	9.3	15.4	16.3	8.0	16.7	9.1	4.8	8.3	9.2	8.0	7.1	5.5	4.6
Egg	0.4	4.5	12.9	13.3	9.3	10.6	15.2	19.4	20.8	16.3	7.1	-1.4	-1.3	1.5
Milk & products	6.6	2.9	5.4	6.4	2.4	-0.1	0.6	1.9	2.7	2.9	3.1	3.2	3.4	3.8
Oils & fats	3.6	2.9	16.0	14.0	30.9	25.9	30.9	34.8	32.5	33.1	34.2	33.6	29.7	24.3
Fruits	2.9	0.7	2.6	1.4	7.4	9.7	11.8	11.8	9.0	6.7	3.6	4.9	6.0	3.5
Vegetables	6.0	21.3	5.8	11.0	-11.3	-14.5	-1.9	-0.7	-7.8	-11.7	-22.4	-19.4	-13.6	-3.0
Pulses & products	2.4	9.9	16.4	17.6	7.1	7.5	9.4	10.0	9.0	8.8	8.7	5.4	3.2	2.4
Sugar & confectionery	1.4	0.8	2.5	3.5	1.3	-6.0	-1.5	0.8	-0.5	-0.6	3.0	5.4	6.2	5.6
Fuel & Light	6.8	1.3	2.7	2.3	12.2	8.0	11.9	12.6	12.4	12.9	13.6	14.3	13.3	11.0
CPI excl. food and fuel group (Core)	47.3	4.0	5.5	5.4	5.9	5.3	6.6	6.1	5.8	5.8	5.9	5.9	6.2	6.0

Source: NSO  
<sup>^</sup>April to December 2020

P: Provisional \* Consumer Food Price Index  
<sup>#</sup> April to December 2021

**Figure 3: Trends in CPI-C Headline, Core and Food inflation**

Source: NSO, MoSPI

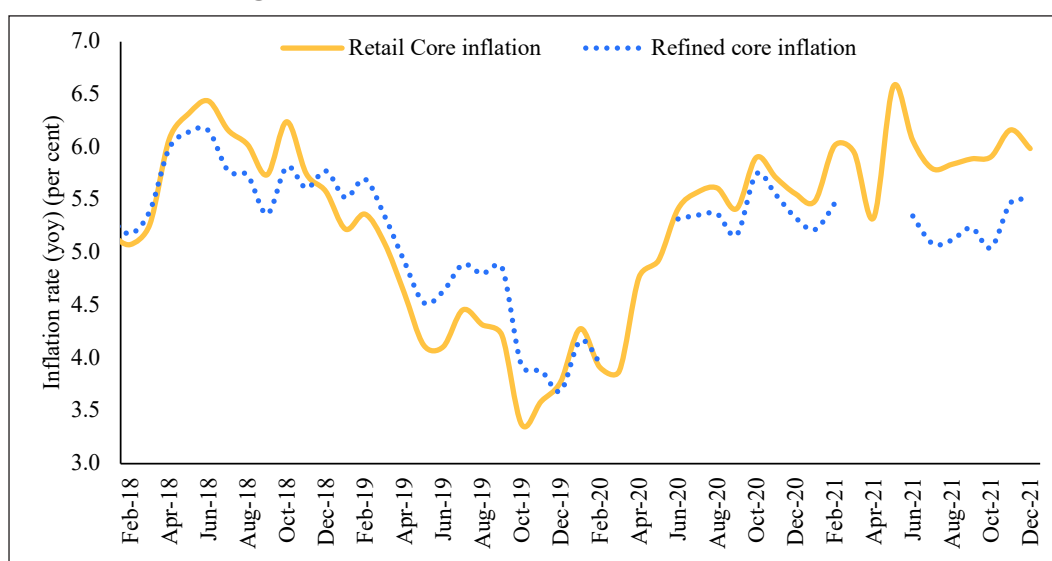
5.7 Conventionally, core inflation is calculated by excluding ‘food and beverages’ and ‘fuel and light’<sup>1</sup> groups from overall inflation. While in CPI-C, major fuel items such as ‘petrol for

1. ‘Fuel and light’ consist mainly of items used by households to meet their domestic fuel needs excluding that for conveyance such as electricity, LPG, Kerosene and other fuels used for cooking. On the other hand, petrol and diesel used for vehicles is included in the ‘transport and communication’ sub-group of the miscellaneous group.

vehicle’ and ‘diesel for vehicle’, which have relatively large weights, are not included in ‘fuel and light’. These fuel items are included in ‘transport and communication’, a subgroup under the miscellaneous group. Therefore, conventional way of calculating retail core inflation, instead of excluding the volatile fuel items from core inflation, continue to include volatile fuel items in core inflation. As a result, the fuel price rise continues to impact core inflation.

5.8 A ‘refined’ core inflation was constructed to address this anomaly by excluding main fuel items viz., ‘petrol for vehicle’, ‘diesel for vehicle’ and ‘lubricants and other fuels for vehicles’, in addition to ‘food and beverages’ and ‘fuel and light’ from the headline retail inflation. Both the conventional core inflation and refined core inflation are presented in figure 4. Since June 2020, refined core inflation has been much below the conventional core inflation, indicating the impact of inflation in fuel items in the conventional core inflation measure.

**Figure 4: Retail Core and ‘Refined Core’ inflation**



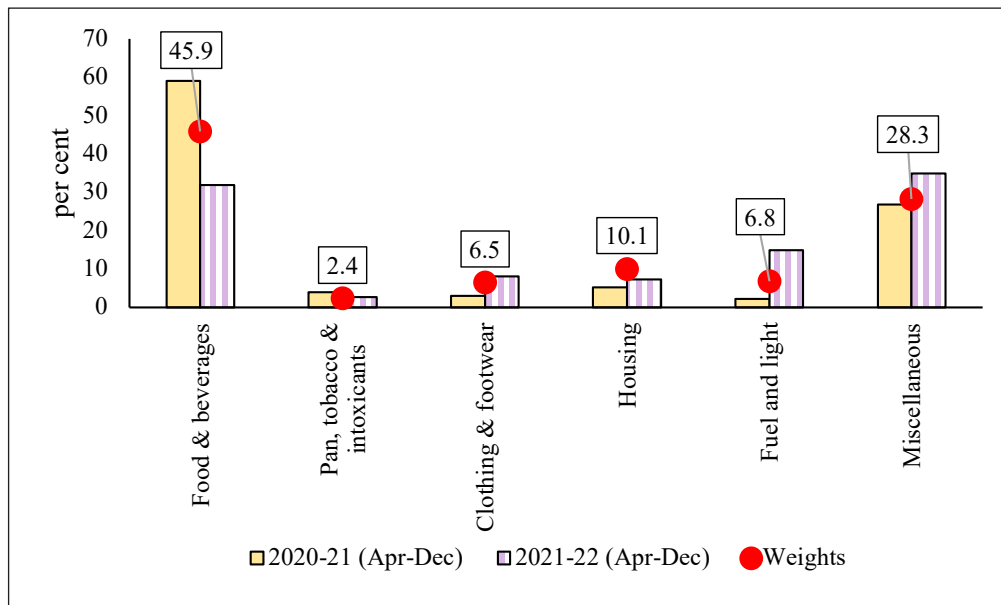
Source: NSO, MoSPI

Note: Item level indices for ‘petrol for vehicle’, ‘diesel for vehicle’ and ‘lubricants and other fuels for vehicles’ were not available for March-May 2020.

### What has driven retail inflation and why?

5.9 Unlike 2020-21 (April-December) when ‘food and beverage’ drove inflation, during 2021-22 (April to December) the major drivers of retail inflation have been miscellaneous and ‘fuel and light’ group. Contribution of miscellaneous group has increased from 26.8 per cent in 2020-21 (April-December) to 35 per cent in 2021-22 (April-December) and contribution of ‘fuel and light’ increased from 2.3 per cent to 14.9 per cent (Figure 5). On the other hand, during the same period, contribution of ‘food and beverages’ declined from 59 per cent to 31.9 per cent. Within ‘miscellaneous group’, sub-group ‘transport and communication’ contributed the most, followed by health.

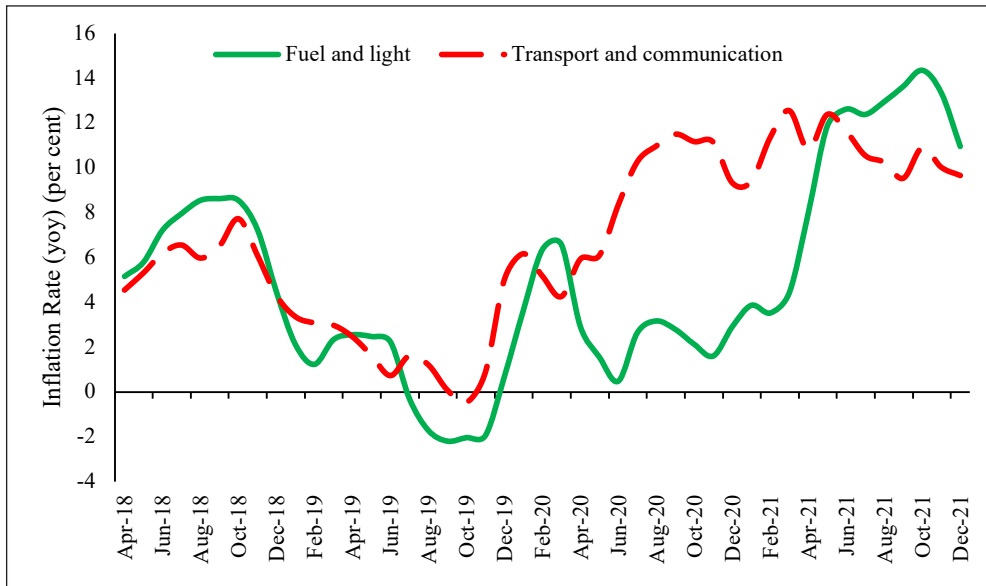
**Figure 5: Contribution of groups to overall CPI-C inflation in 2020-21 (April-December) and 2021-22 (April-December) in per cent**



Source: NSO, MoSPI

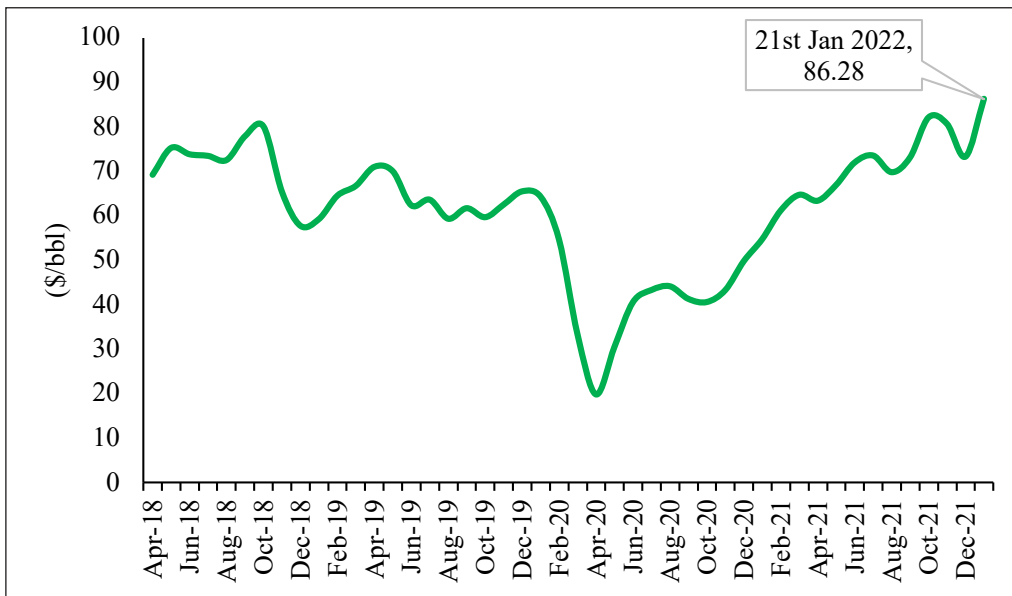
**5.10 ‘Fuel and light’ and ‘Transport and communication’:** In 2021-22 (April-December), inflation in ‘fuel and light’ and ‘transport and communication’ was mostly driven by high international crude oil, petroleum product prices, and higher taxes (Figure 6). In April 2020, in response to subdued global demand because of COVID-19 induced restrictions, the price of Indian basket of crude oil dipped to \$19.9/bbl. However, thereafter, the prices have been on an uptrend (Figure 7). The upward trend was on account of unprecedented cuts in crude oil supply by OPEC and other oil producing countries. The upward trend continued in 2021 as well, as demand picked up with easing of COVID-19 restriction in most regions of the world. Besides, the unwinding of production cuts made last year by OPEC+ countries has been gradual and has not kept pace with the recovery in demand. However, since second half of October 2021 crude oil prices had softened, due to factors including rising COVID-19 cases in Europe, and possibility of release of crude oil from strategic reserves by the USA and other countries. Further, cut in central excise duty on petrol and diesel followed by reduction in VAT by majority of the State Governments, led to moderation of retail selling price of petrol and diesel in India in 2021 (Figure 8). However, crude oil price again witnessed an uptick in January 2022 with tight supply amid concerns about rising geopolitical uncertainties in Eastern Europe and the Middle East.

**Figure 6: 'Fuel and light' and 'transport and communication' inflation**



Source: NSO, MoSPI

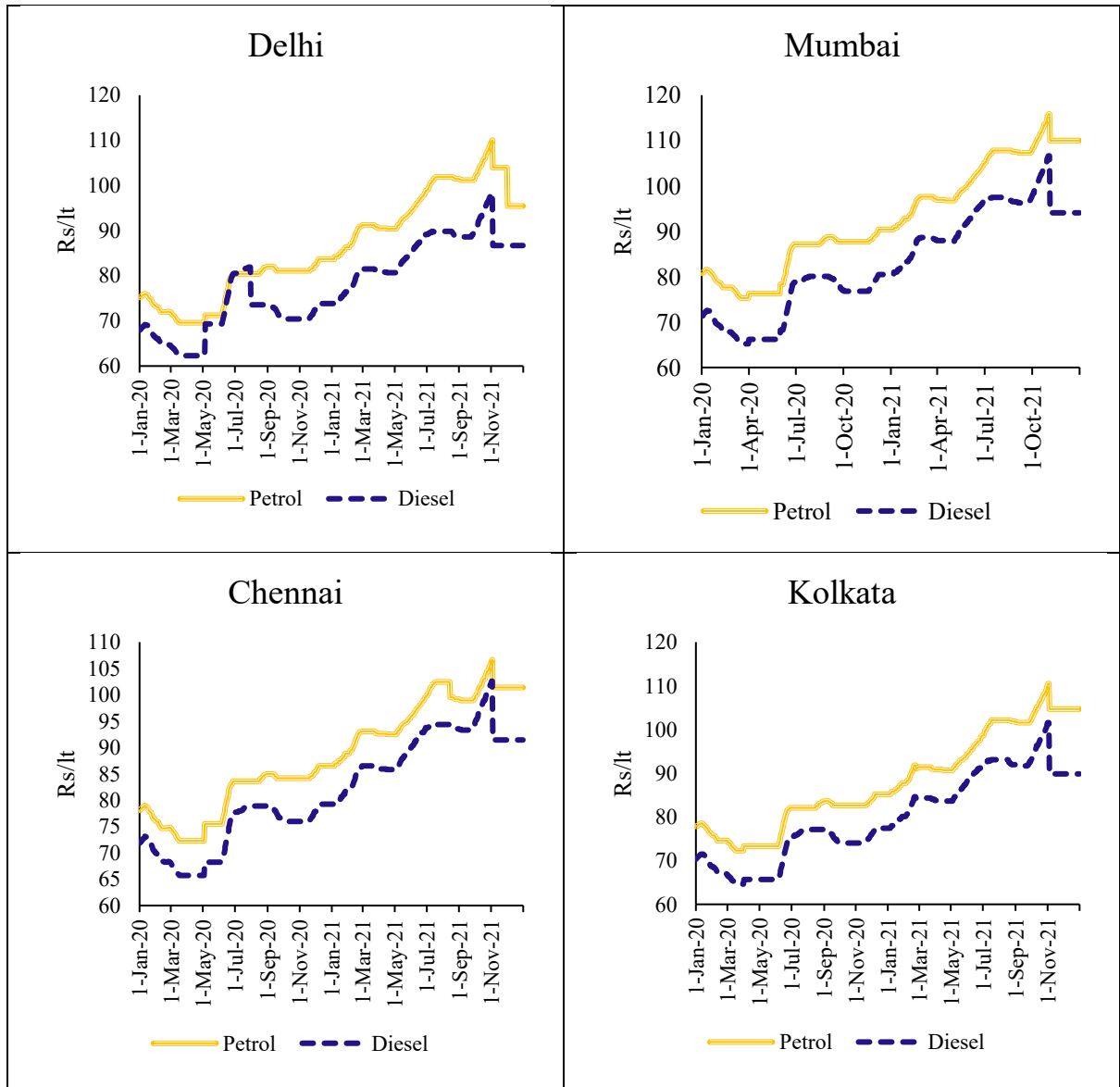
**Figure 7: International Crude Oil Price (Indian Basket)**



Source: PPAC, MoPNG



**Figure 8: Retail Selling Price (RSP) of Petrol and Diesel in four Metros**



Source: PPAC, MoPNG

**5.11 Miscellaneous:** During 2021-22 (April-December), the ‘miscellaneous’ group by accounting for around 35 per cent of overall inflation has been important driver of retail inflation. Within this group, high inflation in subgroup ‘transport and communication’ driven mainly by inflation in petrol and diesel for vehicle, have been contributing significantly. ‘Clothing and footwear’ inflation also saw a rising trend during the current financial year possibly indicating higher production and input costs (including imported inputs) as well as due to revival of consumer demand.

**5.12 ‘Food and beverages’:** Retail food inflation remained above 8 per cent from November 2019 to November 2020, but declined thereafter, recording inflation of 2.9 per cent in 2021-22 (April-December). Inflation in cereals and products remained negative during April to September 2021 and remained low in October-December 2021, indicating sufficient supply of cereals, well supported by an effective Public Distribution System providing subsidized food

grains to the bottom 67 per cent of the population as per 2011 census under the National Food Security Act, 2013.

5.13 During 2021-22 (April to December), inflation in ‘vegetables’ remained negative at (-)11.3 per cent; contributing negatively to the overall retail inflation. Though, tomato prices spiked after end of September 2021 owing to crop damage and delay in arrival of produce in mandi because of unseasonal heavy rains in producing states of Punjab, Uttar Pradesh, Haryana, and Himachal Pradesh. Pressure on tomato prices was further exacerbated due to disruption of tomato supply by heavy rains in producing states of Tamil Nadu, Andhra Pradesh, Telangana and Karnataka. In December 2021, tomato prices have moderated with arrival of fresh supplies. Inflation of onion and potato remained negative throughout the year. Both seasonality and exogenous shocks impact retail prices of tomato and onion (Box 1).

5.14 Inflation in protein-based items like ‘meat and fish’ remained considerably elevated during 2021-22 (April to December), due to COVID-19 related supply disruptions and high poultry feed prices owing to high prices of soybean meal. While the average inflation of ‘meat and fish’ has been lower during 2021-22 (April to December) at 8.0 per cent compared to 15.4 per cent in 2020-21. Inflation in ‘meat and fish’ declined since September 2021, and was 4.6 per cent in December 2021, the lowest during the current financial year. Inflation in egg has shown steady decline since July 2021, and remained negative in October 2021 and November 2021. Inflation in ‘pulses and products’ remained high in the previous financial year, however, declined steadily since July 2021 due to proactive supply management efforts by the Government.

### Box 1: Seasonality and irregularity in the retail prices of tomato and onion

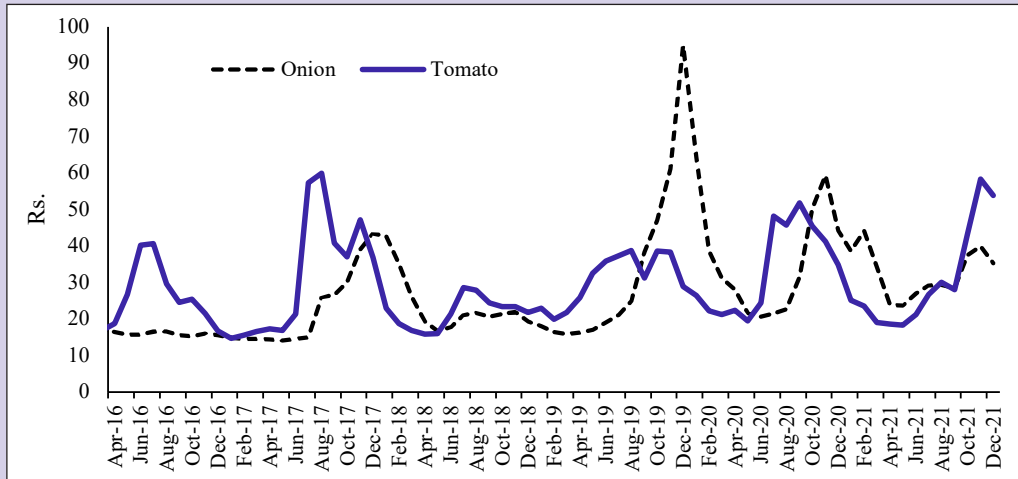
Seasonality in production and irregular shocks are two important components contributing to the variations in prices of agriculture commodities, more so in prices of perishable commodities such as tomato and onion. Seasonality in prices is a result of the varying pattern of production of these commodities during different months of a year. On the other hand, shocks often originate from uncertain weather conditions and other unpredictable events. Distinguishing between these two, however, is important as policy can be oriented at least towards addressing the more certain seasonal pattern of price rise.

A time series often has four components: Trend, Cycle, Seasonal and Irregular. Trend indicates a long-term rise or fall in prices. A cycle represents a rise or fall in prices that are not of a fixed frequency such as representing business cycles. Seasonality is of fixed frequency and occurs at particular points of time during the year. Seasonality in prices could occur due to the seasonal pattern of production of agricultural commodities or seasonality in demand such as major festivals. Irregular component is the remainder in a time series after removing the trend, cycle and seasonal components. Its magnitude, impact and duration are unpredictable a priori.

For the current analysis, the seasonal component of the prices is extracted to identify the seasonality in these commodities in different months of the year. On the other hand, the irregular component can be used to identify points of time when various exogenous shocks have caused spikes in the prices of commodities. The Seasonal-Trend Decomposition Procedure based on Loess (STL) (Cleveland et

al., 1990) was used for the decomposition. The monthly retail price data at the All-India level have been taken from Department of Consumer Affairs. The figure 1A shows the trend of the retail prices of tomato and onion.

**Figure 1A: Retail prices of tomato and onion**



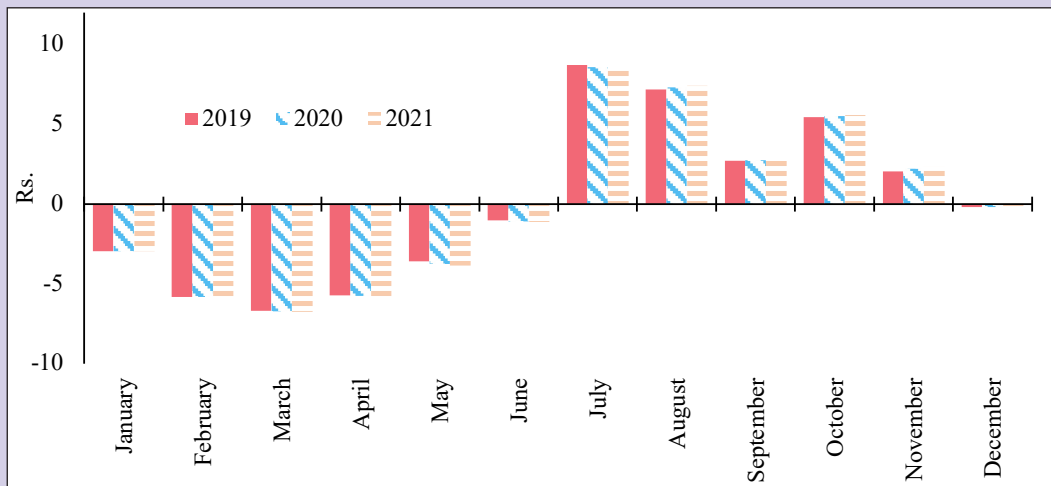
Source: Department of Consumer Affairs

**1. Tomato:**

**Seasonality in tomato:**

The seasonal components tend to put an upward pressure on prices of tomato during July to November every year; upward pressure remain highest in July (Figure 1B). On the other hand, seasonal factor puts largest downward pressure on prices in March. This seasonality in prices results from the seasonal pattern of production of tomato, as about 70 per cent of production of tomato takes place during Rabi season: transplantation during October-February and harvest during December-June. Kharif production during July-November usually contributes less than 30 per cent of total production of tomato in a year. This variation in supply puts upward pressure on tomato prices every year during July-November. If there were no irregular shocks, then seasonality would have caused tomato prices to be around Rs. 15 higher in July 2021 over March 2021 compared to the long-term trend.

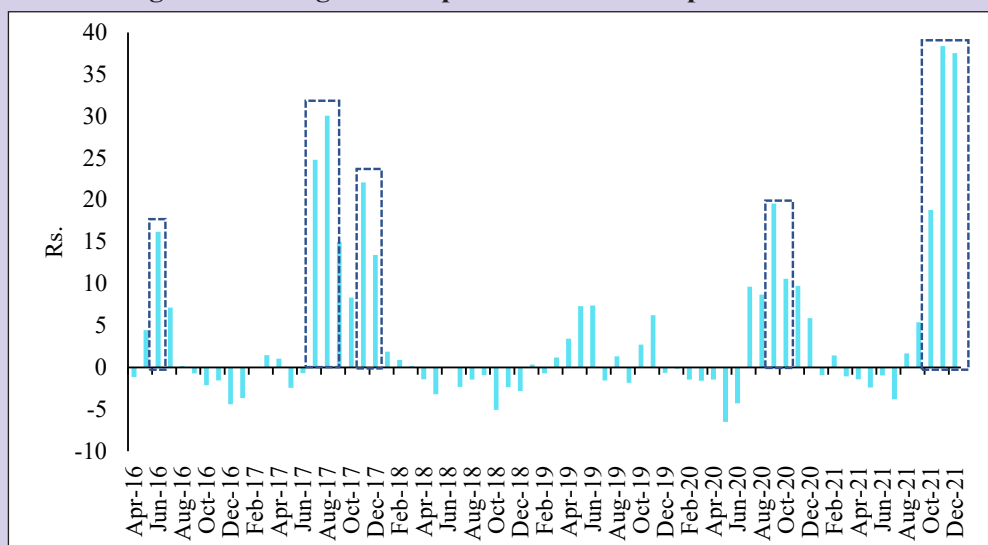
**Figure 1B: Seasonality in the retail prices of tomato**



Source: Survey calculations

**Price shocks in tomato:**

Figure 1C presents the irregular component in the retail price series of tomato during the last 5 years. The large jumps in the chart can be used to identify incidents of price shocks. Six instances have been identified when the irregular component has displayed a large spike (close to or greater than Rs. 10) in the case of the retail price of tomato. Possible reasons for the spikes are given in the Table 1A.

**Figure 1C: Irregular component in the retail prices of tomato**

Source: Survey calculations

**Table 1A: Incidents of price shocks in tomato during the last five years**

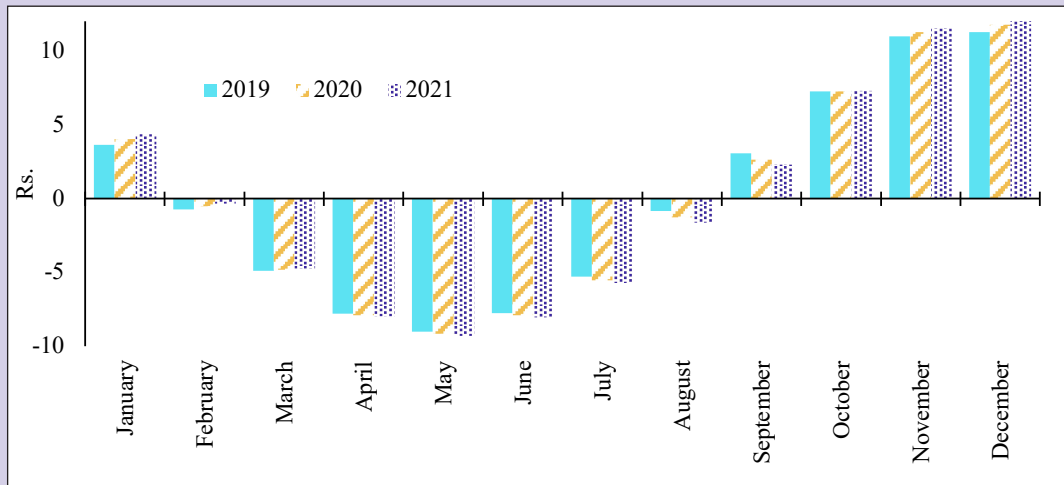
Incidents identified	Reasons
June 2016	Short supply of tomato, as the Rabi crop of 2016 got damaged by severe drought conditions in the southern states.
July-August 2017	Rains in Madhya Pradesh and Rajasthan caused some damage to the crop. In addition, issues with transportation with trucks taking more than the normal time due to the rains leading to reduction in arrivals. Stocks stored got spoiled due to the rain.
November-December 2017	Unseasonal rains in growing regions such as Karnataka and Madhya Pradesh.
May 2019	Delayed harvesting in Maharashtra as well as fungus damaged crops in Karnataka triggered the initial uptick in prices, which was exacerbated by supply disruptions due to incessant rains and flood like situations in key supplier states – Karnataka, Maharashtra and Himachal Pradesh.
September 2020	Lower arrival of the new crop from key growing states due to heavy rains.
November 2021	Unseasonal rains in Punjab, Uttar Pradesh, Haryana and Himachal Pradesh which led to crop damage and delay in arrival from these states. Delayed arrivals from the northern states were followed by heavy rains in Tamil Nadu, Andhra Pradesh, Telangana and Karnataka which further disrupted the supply.

**2. Onion:**

**Seasonality in onion:**

Rabi season: transplantation in December-January and harvest in end March to May - accounts for about 70 per cent of total onion production in a year. The seasonal component is found to put downward pressure (negative values in Figure 1D) on prices coinciding with the Rabi harvest period, and upward pressure (positive values) in other months, reaching peak in December. The other two production seasons viz., Kharif - transplantation in July-August and harvesting in October-December -, and late Kharif - transplantation in October-November and harvest in January-March, face supply deficit.

**Figure 1D: Seasonality in the retail prices of onion**

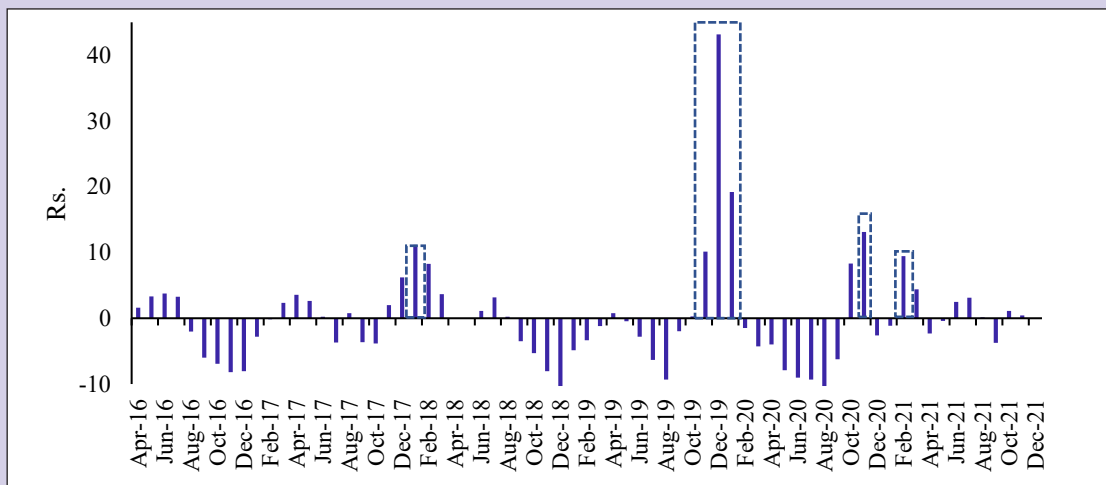


Source: Survey calculations

**Price shocks in onion:**

Four incidents of price shocks have been identified based on the inspection of the plot of irregular component in the retail price of onion (Figure 1E). Possible reasons of the incidents are listed in Table 1B.

**Figure 1E: Irregular component in the retail prices of onion**



Source: Survey calculations

**Table 1B: Incidents of price shocks in onion during the last five years**

Incidents identified	Reason
January 2018	Fall in production in 2017-18 as against the previous year. Weather conditions in Maharashtra including cyclones and low pressures forming along the west coast, production of onion was adversely affected in areas like Sholapur, Nasik, Ahmednagar and Lasalgaon.
November 2019-January 2020	Untimely and prolonged rains during month of September and October 2019 caused damage to Kharif onion crop leading to short supply and increase in its prices.
October-November 2020	Heavy rainfall in September in Karnataka - responsible for a bulk supply ahead of the kharif crop from Maharashtra towards the end of October - has upset the calculations. September rains, according to reports, have hit not only the supply from Karnataka, but Maharashtra too where heavy rainfall in onion belt comprising Ahmednagar, Nashik and Pune affected the storage with water seepage.
February 2021	Delay in arrivals of the late kharif crop as the growing regions experienced rains in January 2021.

### *Conclusion*

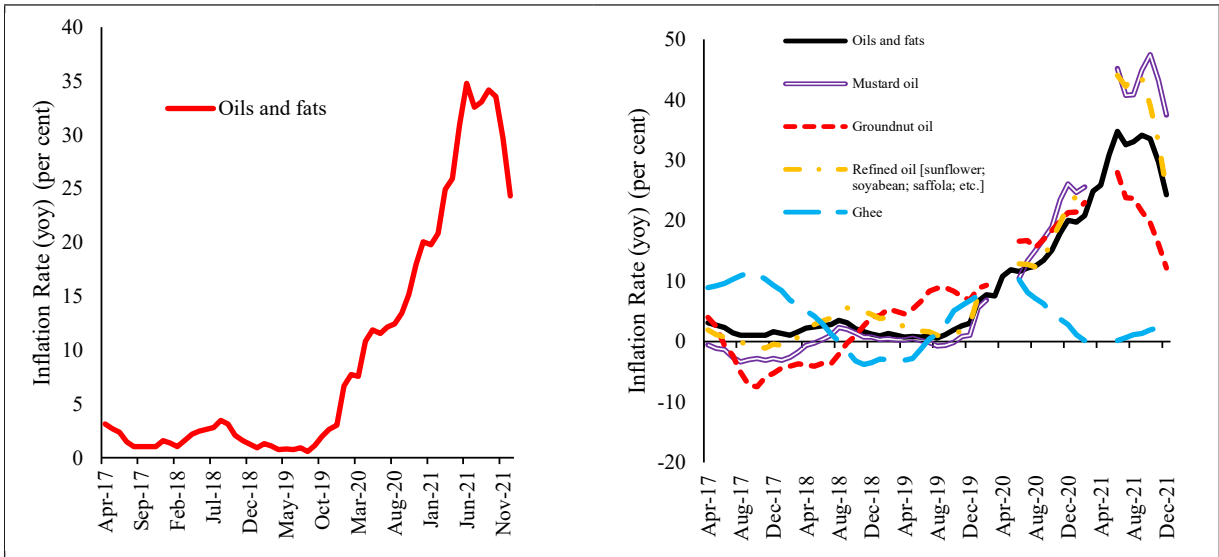
Both seasonal as well as shock components contribute in the spikes of the tomato and onion prices. Seasonality in prices resulting from seasonal production patterns require policy attention. Strategies to incentivize production during lean season should be designed. Investments in processing of surplus production of tomato, and processing and storage infrastructure of onion must be promoted. Cutting wastage of the production, better supply chain management will also help in meeting the demand.

Government is implementing various measures to overcome these challenges. The Mission for Integrated Development of Horticulture (MIDH) envisages holistic development of horticulture and provides assistance at 50 per cent of total cost of Rs. 1.75 lakh per unit for low-cost onion storage structure having a capacity of 25 tonne each. Government also procures onions directly from farmers at farm gate prices for the buffer. Schemes such as Agricultural Marketing Infrastructure (AMI) for rural godowns enables small farmers to enhance their holding capacity to sell their produce at remunerative prices and avoid distress sale. “Operation Greens” for integrated development of Tomato, Onion and Potato (TOP) value chain. It provides 50 per cent subsidy for the transportation and storage from surplus producing areas to consuming centres. Kisan Rail service, was launched on 7th August 2020 to enable speedy movement of perishables including fruits, vegetables, meat, poultry, fishery and dairy products from production or surplus regions to consumption or deficient regions.

5.15 ‘Oils and fats’ contributed around 60 per cent of ‘food and beverages’ inflation despite having a weight of only 7.8 per cent in the group. Inflation of the sub-group has risen sharply since mid-2019; remained in double digits since April 2020 and witnessed further uptrend in

2021-22 (Figure 9). In 2021-22 (April - December), its inflation has been 30.9 per cent, and stood at 24.3 per cent in December 2021.

**Figure 9: Inflation in 'Oils and fats' subgroup**

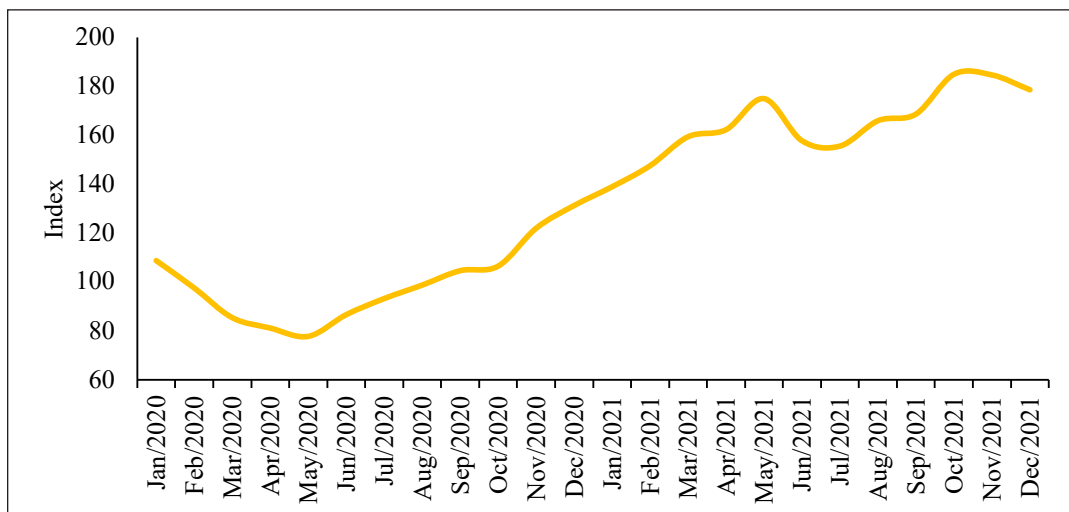


Source: NSO, MoSPI

Note: Item level indices for ‘mustard oil’, ‘groundnut oil’ ‘refined oil’ and ‘ghee’ were not available for March-May 2020.

5.16 India imports around 60 per cent of its consumption of edible oils’, and Palm oils (Crude + Refined) constitutes around 60 per cent of the imports of edible oils (PIB, 2021). As a result, fluctuation in imports and international prices transmit to domestic prices of edible oil. The current spike in prices of edible oils is mainly on account of high and increasing international prices of edible oils. The rise in oils component of Food and Agriculture Organisation’s (FAO) food price index from May 2020 onwards has been steep, and reached a 10-year high due to robust global import demand amidst the shortages over migrant labour impacting production in Malaysia (Figure 10; FAO, 2021).

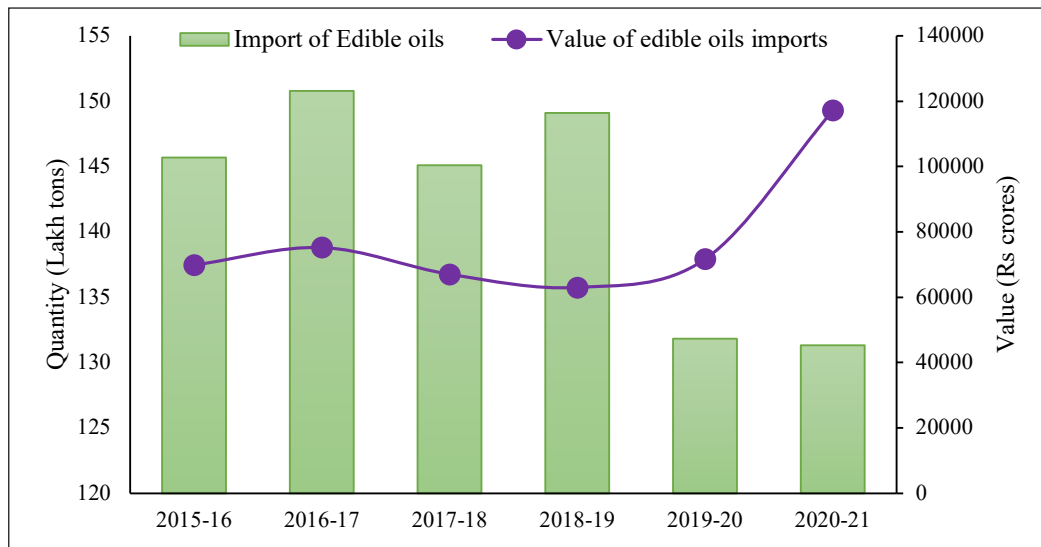
**Figure 10: FAO Food Price Index: Edible oils component**



Source: FAO

5.17 The rise in international prices were accompanied by a decline in imports of edible oils. During the oil year 2020-21 (November 2020-October 2021), India's imports of edible oils has been the lowest in last six years (Figure 11). However, in terms of value, it has increased by 63.5 per cent in 2020-21 as compared to 2019-20, reflecting the rise in international prices of edible oils.

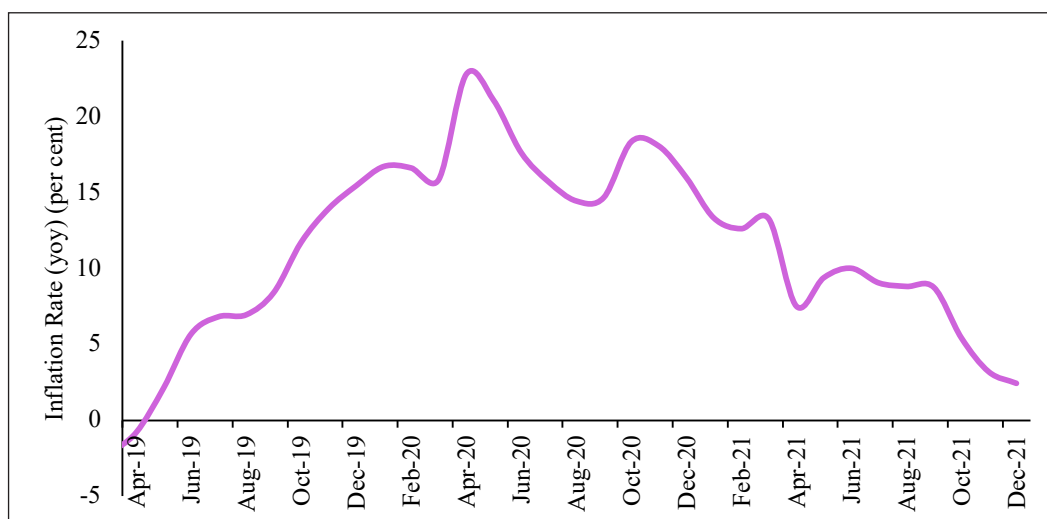
**Figure 11: Import of Edible oils**



Source: Solvent Extractors Association of India

5.18 Inflation in Pulses, recorded 16.4 per cent in 2020-21, has declined in 2021-22 (April-December) to 7.1 per cent, and 2.4 per cent in December 2021. The high inflation in 2020-21 was on account of supply-side disruptions as a fallout of restrictions imposed to contain spread of COVID-19, and stocking of pulses by households during the lockdown. With easing of restrictions and an increase in area sown for Kharif pulses to a new high of 142.4 lakh hectare (as on 1st October 2021) incentivised by high prices witnessed last year, pulses inflation is on a downward trajectory (Figure 12).

**Figure 12: CPI-C inflation in Pulses and Products**



Source: NSO, MoSPI



## Box 2: Steps taken by the Government to augment the supply of essential commodities

The government has undertaken several measures to mitigate rise in prices of essential commodities:

### Pulses and onion

#### *Creating a buffer*

- To ensure effective intervention during price rise through utilisation of buffer stocks, the Government has procured pulses in 2020-21 and 2021-22 from farmers/farmers' producers organisations (FPOs). The target for pulses buffer in 2021-22 is at 23 LMT. onion buffer of 2.08 LMT has been created in 2021-22 and released in a calibrated and targeted manner to contain price rise.

#### *Import policy*

- To augment domestic availability of pulses, Tur and Urad are kept under 'free' import category till 31st March, 2022.
- Basic import duty and Agriculture Infrastructure and Development Cess on Masur have been brought down to zero and 10 per cent respectively.
- 5-year MoUs have been signed with Myanmar for annual import of 2.5 LMT of Urad and 1 LMT of Tur, and with Malawi for annual import of 0.50 LMT of Tur. The MoU with Mozambique has been extended for another 5 years for annual import of 2 LMT Tur.

### Edible Oils

- To soften the prices of edible oils, the duty on edibles oil has been reduced with effect from 14th October 2021.
- To soften the prices of edible oils, the basic duty on Refined palm oil/Palmolein, Refined Soyabean oil and Refined Sunflower oil has been reduced to 17.5 per cent from 32.5 per cent with effect from 14th October 2021.

#### *Speculation and hoarding*

- Futures trading in mustard oil on NCDEX has been suspended and stock limits have been imposed.
- The Department of Food and Public Distribution has imposed stock limits on Edible Oils and Oilseeds for a period up to 31st March, 2022. The Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuffs (Amendment) Order, 2021 has been issued w.e.f. 8th October, 2021. It has also been directed to ensure that Edible Oils and Edible Oilseeds stock is regularly declared and updated on the portal of the Department of Food & Public Distribution.

#### *Production and alternates*

- The government is taking steps to improve the production of secondary edible oils, especially rice bran oil to reduce the import dependence.

#### *Soyameal included as essential commodity*

- In a bid to cool down the domestic prices of Soya Meal, Government has notified an Order under

the Essential Commodities Act to declare ‘Soya Meal’ as an Essential Commodities up to 30th June, 2022 by amending the Schedule of the Essential Commodities Act, 1955. Stock limit on Soya Meal has been imposed for a period from 23rd December, 2021 upto 30th June, 2022.

### Perishable essential commodities

- For perishables, Operations Green scheme was launched in November 2018. The scheme has later been expanded from TOP (Tomato, Onion, Potato) to TOTAL (41 perishables). Expansion of the scheme has resulted in widening the impact in terms of the production clusters and beneficiaries covered. Currently, 41 perishables from 52 production clusters are being covered. Since beginning till 15.12.2021, Rs.65.79 crore has been provided so far as subsidy towards transportation/storage of 3.05 lakh MT of TOP crops, the expansion of scheme has resulted in additional transportation/storage of 2.82 lakh MT of crops other than TOP with additional subsidy of Rs.51.55 crore.
- Kisan Rail trains introduced to enable speedy movement of perishables from production or surplus regions to consumption or deficient regions. Since the launch of first Kisan Rail service on 7th August 2020 and up to 14th January 2022, Indian Railways have operated 1,900 Kisan Rail services, transporting approximately 6.23 lakh tons of perishables including fruits and vegetables.

### Box 3: Liquefied Petroleum Gas (LPG) and Kerosene price trend

#### LPG

The prices of petroleum products in the country are linked to the price of respective products in the international market. Prices of LPG in the country are based on Saudi Contract Price (CP), the benchmark for international prices of LPG. Saudi CP has risen approximately 258 per cent from April, 2020 to November, 2021 (236 USD to 846 USD).

LPG subsidy is governed under Direct Benefit Transfer for LPG consumers (DBTL) scheme, wherein the subsidy on domestic LPG is regulated based on direction of price trends in international market. Since May, 2020, there is no subsidy to the consumers on Domestic LPG (at Delhi Market). However, in far-flung areas and some other markets, there is some subsidy that varies from market to market mainly due to higher inland freight from port to bottling plant.

In order to provide clean cooking fuel to poor households, in May 2016 the Government launched “Pradhan Mantri Ujjwala Yojana” (PMUY) scheme to provide 5 crore deposit-free LPG connections, subsequently increased to 8 crore. The target of Scheme was achieved in September, 2019, 7 months ahead of the target. Implementation of PMUY majorly contributed to increase in national LPG coverage to from 61.9 per cent as on 01.04.2016 to 99.8 per cent as on 01.04.2021. Further, in budget speech made on 1st February, 2021, announcement was made to cover additional 1 crore beneficiaries under Ujjwala scheme. In its revised version, Pradhan Mantri Ujjwala Yojana was launched as Ujjwala 2.0, by Hon. Prime Minister in August 2021. While it covers all existing eligible categories of beneficiaries, Ujjwala 2.0 makes specific relaxations for migrants who can submit a simple self-declaration as an address-proof, arranging which used to be a major hassle for migrant. Also, free first refill and stove is being provided to all Ujjwala 2.0 beneficiaries. As on 31.12.2021, a total of 96 lakh deposit-free LPG connections have been released under Ujjwala 2.0 scheme, including 2.2 lakh for migrants.

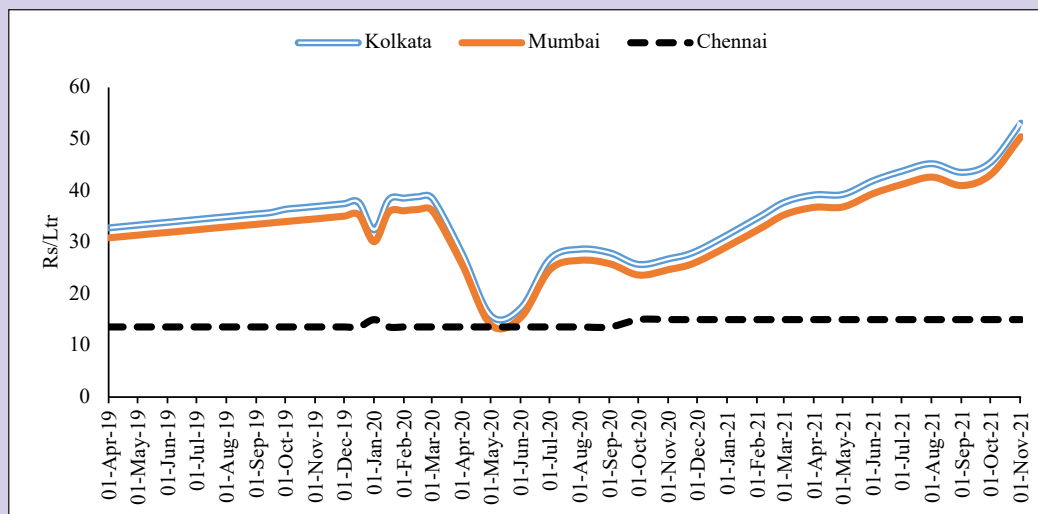
## Kerosene

Kerosene has traditionally been used to meet the lighting and cooking needs, especially in rural areas. Government has decided to phase out use of kerosene for cooking and lighting in view of the increasing coverage of electricity for lighting needs and LPG as a clean cooking fuel. Post Saubhagya (Pradhan Mantri Sahaj bijli har ghar yojana) and Pradhan Mantri Ujjwala Yojana the use of kerosene is steadily going down.

Out of 37 states/UTs, 11 states/UTs<sup>2</sup> are kerosene free i.e. no PDS Kerosene is allocated to these states/UTs by Ministry of Petroleum and Natural Gas (MOP&NG). The balance states/UTs are allocated PDS Kerosene by MOP&NG on a quarterly basis. Kerosene is distributed through PDS and is sold at market price with zero central subsidy. The allocation varies from State to State depending on factors like LPG penetration, non-lifting of PDS Kerosene, voluntary requests for surrender/reduction. State Government of Tamil Nadu is still subsidizing kerosene through state subsidy.

Effective from 1st March, 2020, the retail selling price of PDS Kerosene is being maintained at NIL under-recovery level on pan India basis and is made available to the states at market prices.

Figure 3A: PDS Kerosene Prices



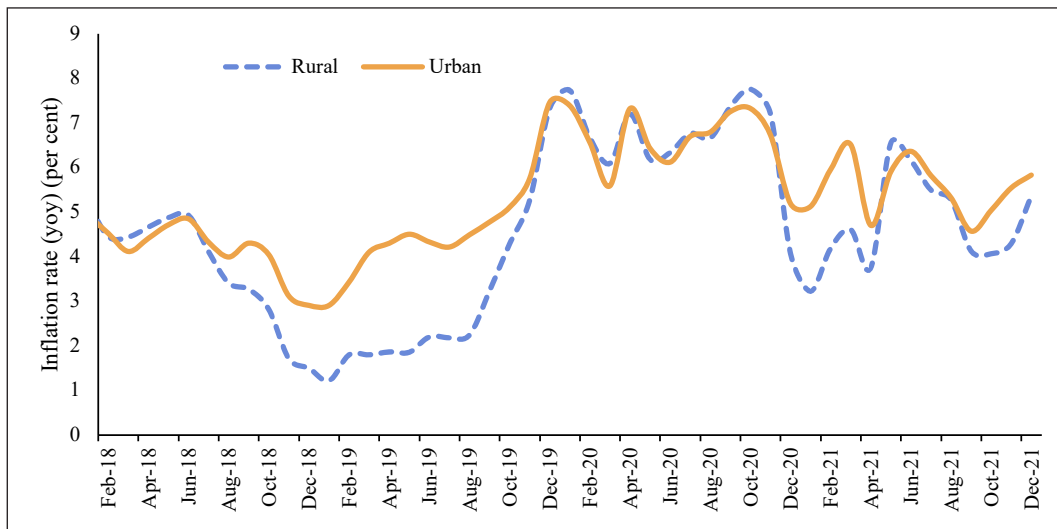
Source: MoPNG

## Rural -- Urban inflation differential

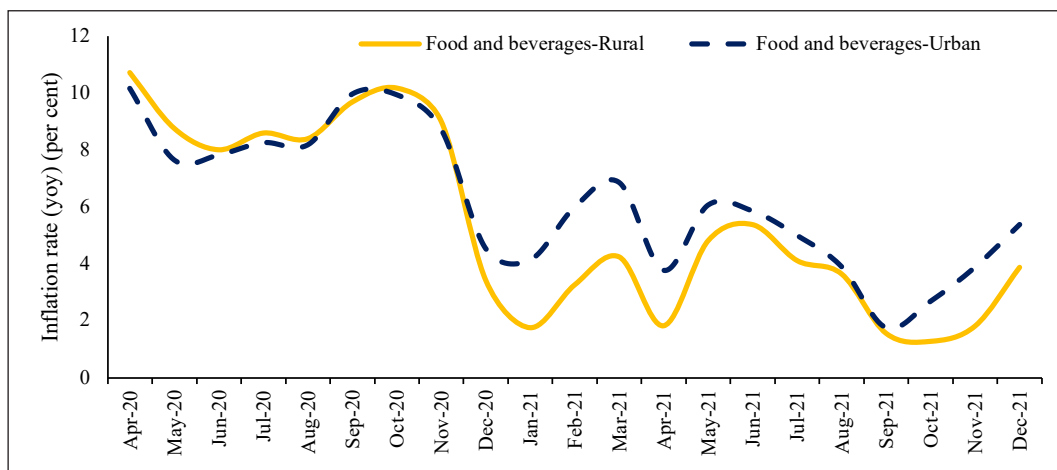
5.19 The large gap witnessed between rural and urban CPI inflation from July 2018 to December 2019 was largely on account of differential rates of food inflation. The gap, however, declined in 2020 (Figure 13). In 2020, CPI-Urban inflation moved closely with CPI-Rural inflation.

5.20 We observe two main divergence points- November 2020 to March 2021, and in September 2021 onwards. The dominant factor in divergence pattern turns out to be 'food and beverages' group. This is mainly on account of large weights that have been assigned to 'food and beverages' group in both CPI rural and urban (Figure 14). Inflation of 'fuel and light' in rural areas has been different from urban areas mainly because of different fuel consumption patterns in the two sectors. However, it doesn't emerge as the dominant factor in diverging patterns of CPI-Rural and CPI-Urban mainly because of low weights assigned in the overall index.

<sup>2</sup>Andhra Pradesh, Arunachal Pradesh, Chandigarh, Dadra & Nagar Haveli, Daman and Diu, Delhi, Haryana, Puducherry, Punjab, Rajasthan and Uttar Pradesh

**Figure 13: CPI Rural and Urban Inflation**

Source: NSO, MoSPI

**Figure 14: 'Food & Beverages' Inflation in Rural and Urban**

Source: NSO, MoSPI

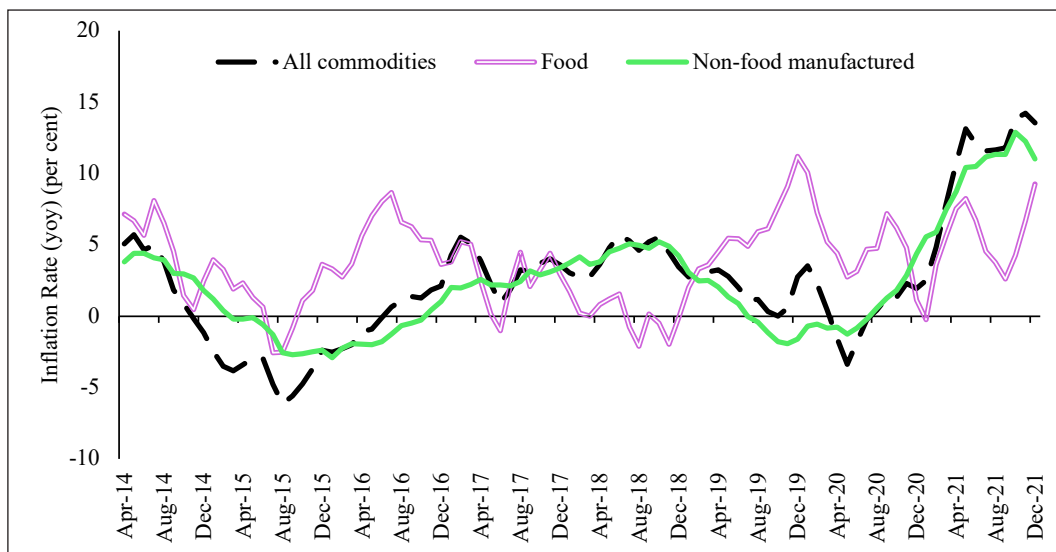
## Trends in Wholesale Price Index based Inflation

5.21 WPI inflation during the current financial year, in contrast to the trends observed in CPI-C inflation, has shown an increasing trend, and remained high (Figure 15). WPI inflation has been benign during 2020-21 and 2019-20 while being moderate or low in the preceding years. Therefore, part of the high inflation in WPI being witnessed currently could be because of a low base in the previous year.

5.22 While WPI inflation has been higher in the current financial year compared to the previous year in all the three major groups, it was above 20 per cent in 'fuel and power' group reflecting the high international petroleum prices as mentioned earlier (Table 3). Within the primary articles group, 'crude petroleum & natural gas' sub-group has witnessed very high inflation and stood at 55.7 per cent in December 2021. Similarly, minerals has witnessed high inflation throughout the year. Impact of rising international prices in WPI manufacturing was clearly visible, especially in manufacture of basic metals (Box 4). Manufacture of basic metals saw

inflation of 27.3 per cent in 2021-22 (April-December). Within manufactured food products, edible oils were a major contributor. During 2021-22 (April to December), edible oils inflation in WPI was 36.4 per cent. As mentioned earlier, the high import dependence on edible oils has meant that high international prices in these products are also reflected in the domestic prices. Inflation in manufacture of textiles also remained high at 15.3 per cent during this period pushed up by the rise in the prices of textile fibres.

**Figure 15: Trend in WPI – All commodities, Food and Non-food manufactured products inflation**



Source: Office of Economic Adviser, DPIIT

**Table 3: Inflation in selected groups of WPI- Base 2011-12 (in per cent)**

	Weight	2019-20	2020-21	2020-21 <sup>^</sup>	2021-22 <sup>#</sup>	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21(P)	Dec-21(P)
All Commodities	100	1.7	1.3	0.0	12.5	10.7	13.1	12.1	11.6	11.6	11.8	13.8	14.2	13.6
Primary Articles	22.6	6.8	1.7	1.3	8.6	9.9	9.4	8.6	6.3	5.9	6.0	7.4	10.3	13.4
Food articles	15.3	8.4	3.2	4.0	2.5	4.6	4.2	3.3	0.1	-0.8	-2.6	1.0	4.9	9.6
Cereals	2.8	7.5	-2.6	-1.4	0.1	-3.1	-2.6	-2.8	-2.9	-1.1	1.3	3.2	4.0	5.1
Pulses	0.6	15.9	11.6	12.1	8.1	10.7	12.1	11.6	8.4	9.5	9.3	5.0	2.9	3.9
Vegetables	1.9	31.1	3.4	7.6	-6.6	-9.0	-7.2	-0.8	-8.3	-12.6	-32.3	-17.4	3.9	31.6
Non-Food Articles	4.1	4.6	1.3	-0.4	20.4	15.6	18.4	18.6	22.9	28.7	29.5	18.4	13.8	19.0
Minerals	0.8	13.2	6.8	3.5	15.3	20.6	13.3	15.3	12.6	7.2	30.8	16.6	20.9	3.8
Crude Petroleum & Natural Gas	2.4	-7.6	-17.4	-25.2	57.9	80.8	59.5	47.0	42.3	34.5	49.0	86.4	76.6	55.7
Fuel & power	13.2	-1.8	-8.0	-11.6	31.4	21.3	36.7	29.3	27.0	28.2	29.5	38.6	39.8	32.3
Manufactured Products	64.2	0.3	2.8	1.5	11.3	9.4	11.3	11.0	11.5	11.6	11.6	12.9	11.9	10.6
Food products	9.1	4.1	5.6	5.0	12.5	13.1	15.6	13.3	13.1	12.7	12.9	12.8	10.3	8.7
Edible oils	2.6	1.5	20.3	17.5	36.4	44.5	51.9	43.6	42.7	40.7	37.4	33.2	23.2	16.8
Food Index	24.4	6.9	4.0	4.3	5.9	7.5	8.2	6.7	4.5	3.8	2.6	4.3	6.7	9.2
Non-Food manufactured products (Core)	55.1	-0.4	2.2	0.8	11.1	8.7	10.4	10.5	11.1	11.3	11.3	12.9	12.3	11.0

Source: Office of the Economic Adviser, DPIIT P: Provisional

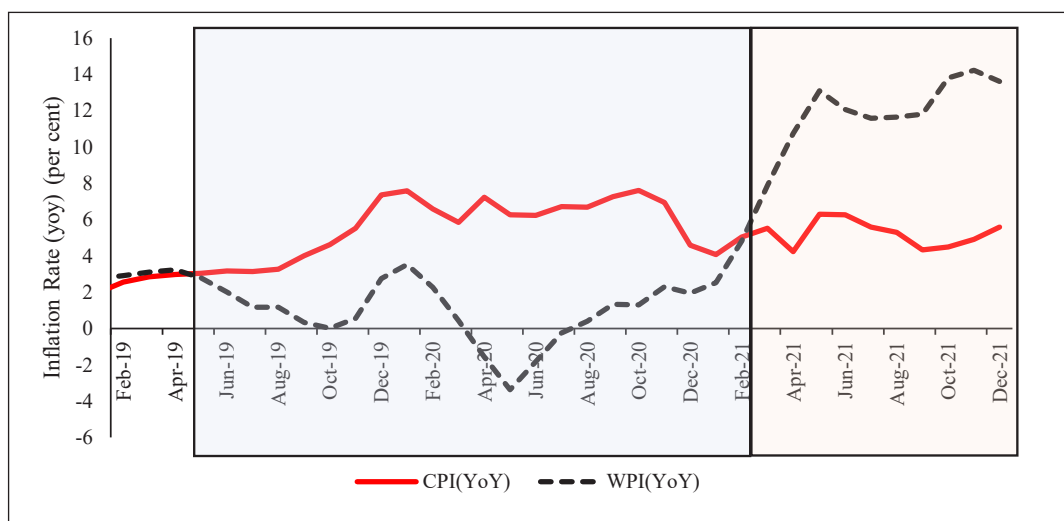
<sup>^</sup>April to December 2020; <sup>#</sup>April to December 2021

## Divergence between WPI and CPI based Inflation rates

5.23 The year-on-year inflation rate based on the WPI and the CPI-C has recorded a divergence since June 2019. Between June 2019 and February 2021, wholesale inflation was lower than retail inflation, while between March 2021 and December 2021, wholesale inflation remained above the retail inflation. WPI inflation during the current year was higher than the CPI but there was also a significant widening of the divergence (Figure 16). In December 2021, WPI based inflation rate was 8 percentage points higher than the retail inflation. This trend raises the potential question: Why is CPI inflation diverging from WPI inflation with WPI inflation being higher than CPI inflation?

5.24 Consequent to the impact of the COVID-19 pandemic, production activity remained muted in 2020-21 and global crude oil prices reached record lows due to lack of demand. Therefore, the WPI based inflation rate touched a low of 1.3 per cent in 2020-21. With economic activity picking up in 2021-22 and edging up of global crude oil prices, the low base of 2020-21 led to WPI inflation reaching a peak of 14.2 per cent in November 2021 and 12.5 per cent during April-December 2021 (as against 0.04 per cent during April-December 2020-21). Therefore, the high WPI based inflation rate in 2021, is largely attributable to the low base of the preceding year. On the other hand, retail inflation that had remained high during 2020-21 due to supply chain disruptions and high food inflation, moderated in 2021-22 on account of effective supply side management, resulting in a divergence between WPI and CPI based inflation.

**Figure 16: Divergence between YoY inflation in CPI and WPI**



Source: NSO, MoSPI and OEA, DPIIT

5.25 While the base effect could be one of the reasons for the divergence in the WPI and CPI, the current divergence in the two indices can also be explained through the conceptual difference in their purpose and design and the price behavior of the different components of the two indices. CPI reflects the buying behaviour of consumers, derived based on the household consumption patterns using NSS Household Consumer Expenditure Survey, and reflects price movements at the retail level. On the other hand, WPI based inflation rate is based on the share of the respective items in total wholesale transactions in the economy at the first point of sale. Therefore, while the weights of items in CPI-C are based on the consumption pattern

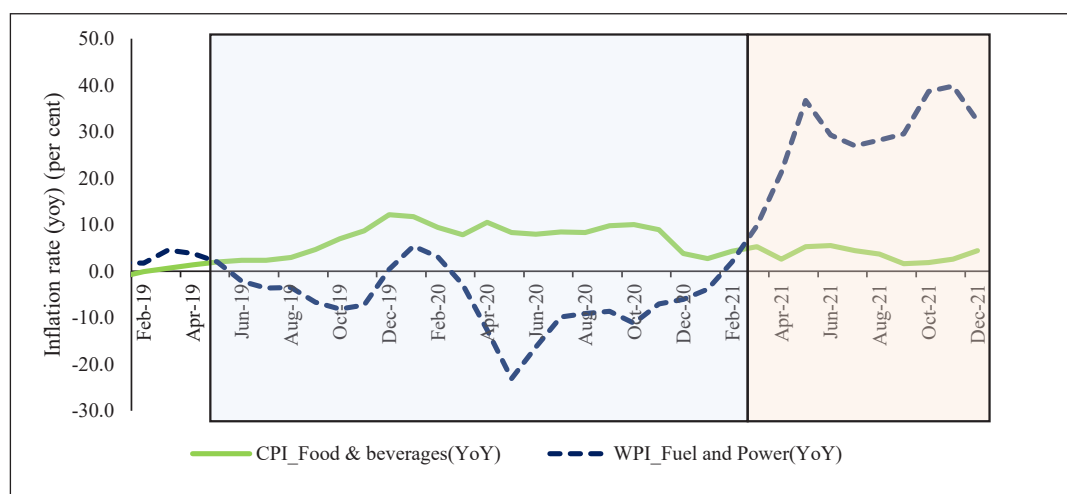
of consumers and households, in case of WPI series, weights of the item basket are derived by calculating the net traded value to the domestic production by adding net imports to domestic production.

5.26 The weights and the importance of specific commodity groups vary significantly in the CPI and WPI. While in CPI, food and beverages have the highest weight (45.9), in WPI, the manufactured group has the highest weight (64.2). The weight of fuel group is much lower in CPI (6.8) as compared to WPI (13.2). Fuel in CPI is also partially reflected under miscellaneous group under ‘transport and communication’. The miscellaneous group in CPI, which makes up about a fourth of the index (28.3), includes services like education, health, recreation, and goods such as gold jewellery. Services are not included in WPI.

5.27 Retail food inflation rose sharply during 2020 due to supply chain disruptions. As supply-side bottlenecks eased and effective supply side measures were taken particularly for items like pulses and edible oils for which imports have been high, food inflation witnessed a decline in 2021 and was 4.0 per cent in December 2021. Average food inflation is at a low of 2.9 per cent in 2021-22 (April-December) as against 9.1 per cent in the corresponding period last year. As against a weight of 45.9 in CPI, food articles have a weight of only 24.4 in the WPI (Food articles in primary group plus those in manufactured group). The high weight of food in the CPI makes CPI more responsive to changes in food prices over WPI.

5.28 As stated above, WPI assigns a large weight to manufactured products and ‘fuel and power’ group. With the near shutdown of industrial activity across nations for long periods on account of the pandemic, energy and inputs demand witnessed a sharp decline and led to a dip in manufactured products inflation. However, with reopening up of the economies worldwide, unanticipated increase in energy prices and emergence of industrial input cost pressure and high freight costs led to a sharp spike in WPI inflation in 2021. This was reflected in high WPI inflation in the fuel group and manufactured sector during the year. Thus, while on the one hand, low food inflation pulled down CPI, on the other hand high energy and input prices pulled up WPI based inflation rate (Figure 17).

**Figure 17: YoY Inflation cycles in retail food and wholesale energy prices**



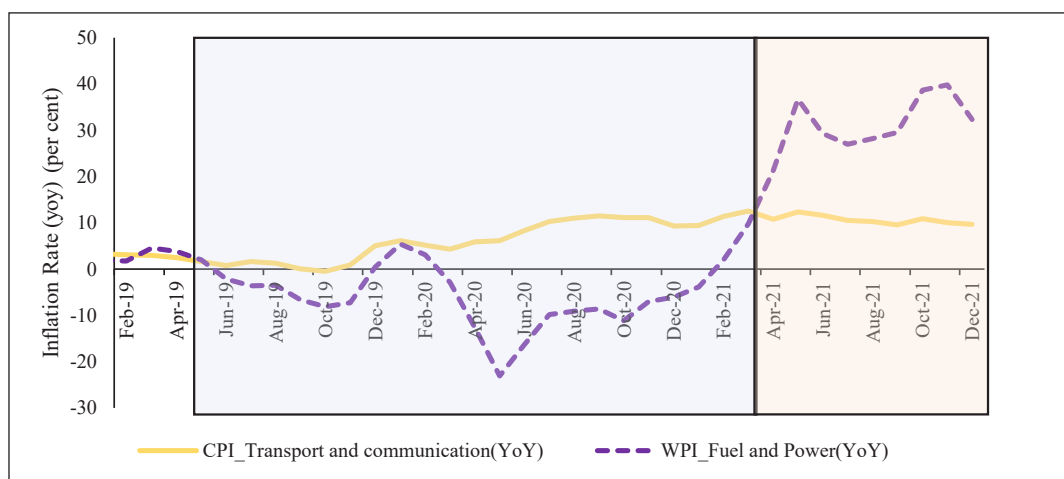
Source: NSO, MoSPI and OEA, DPIIT



5.29 The manufactured sector not only uses crude oil but also several other imported items as inputs such as iron ore, aluminium, other metals and cotton. The intermediate and inputs items of WPI, not part of CPI, play a role in its divergence from CPI. The spike in global prices of various input items which have a high import share, would significantly impact WPI (Box 4), and not CPI.

5.30 While inflation in CPI subgroup ‘transport and communication’, which includes the petrol and diesel for vehicle, steadily inched up, WPI’s sub-group ‘fuel and power’, which includes petrol and diesel, remained very volatile (Figure 18). The contribution of fuel group in WPI inflation was higher on account of their higher weight in the index as compared to that of subgroup ‘transport and communication’ in the CPI. (Figure 18)

**Figure 18: Diversion between retail and wholesale energy inflation rates**

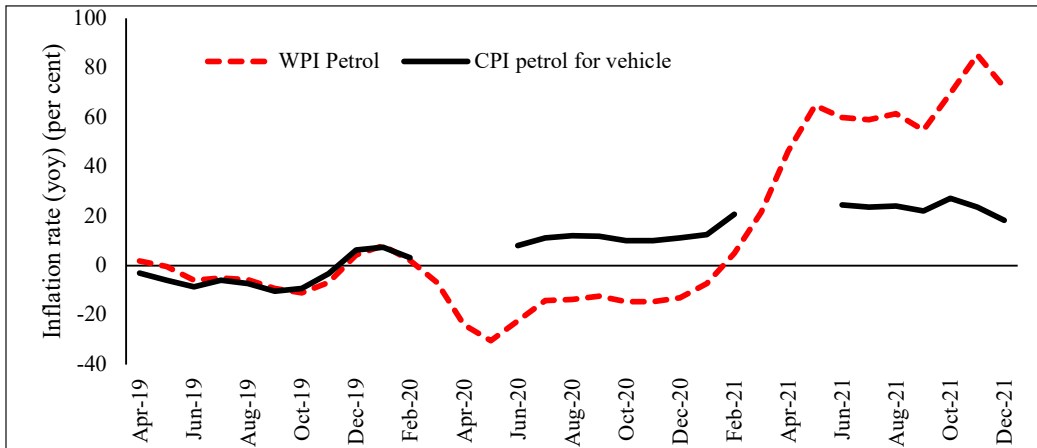


Source: NSO, MoSPI and OEA, DPIIT

5.31 The decline in wholesale prices of petrol and diesel in 2020 (it excludes taxes and levies), due to the decline of crude oil demand, created the low base for wholesale inflation during 2021, while, retail inflation of petrol and diesel was impacted by the higher excise duties that were levied as revenues from other sources dried up due to disruption of economic activity. With the revival of economic activity in 2021-22, crude oil prices started inching up. In November 2021, a reduction in central excise duty was announced for diesel and petrol. While this cut in central excise duties and subsequent reduction in VAT by majority of the states had a dampening effect on retail prices of diesel and petrol, wholesale prices continued to reign high resulting in the widening of the divergence (Figure 19 & 20).



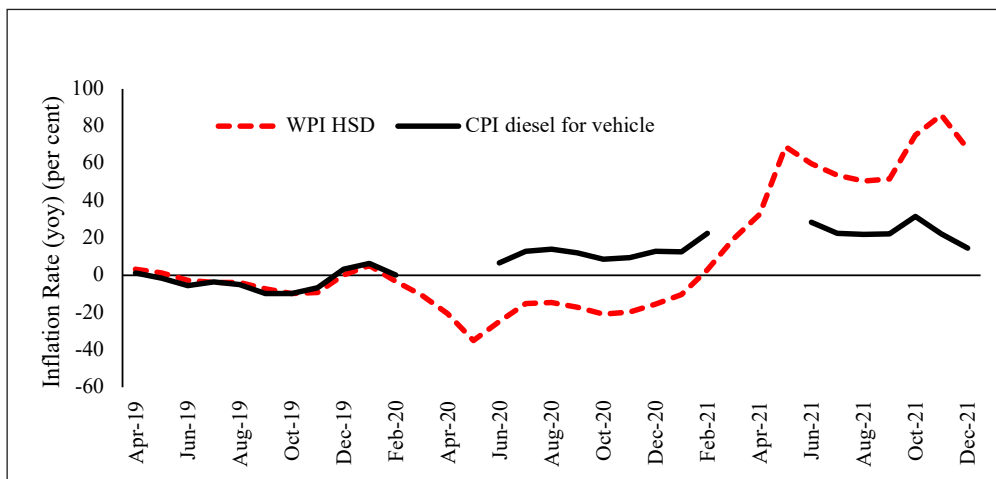
**Figure 19: Retail and wholesale inflation rate of Petrol**



Source: NSO, MoSPI and OEA, DPIIT

Note: Item level index for CPI petrol for vehicle was not available for March-May 2020.

**Table 20: Retail and wholesale inflation rate of Diesel**



Source: NSO, MoSPI and OEA, DPIIT

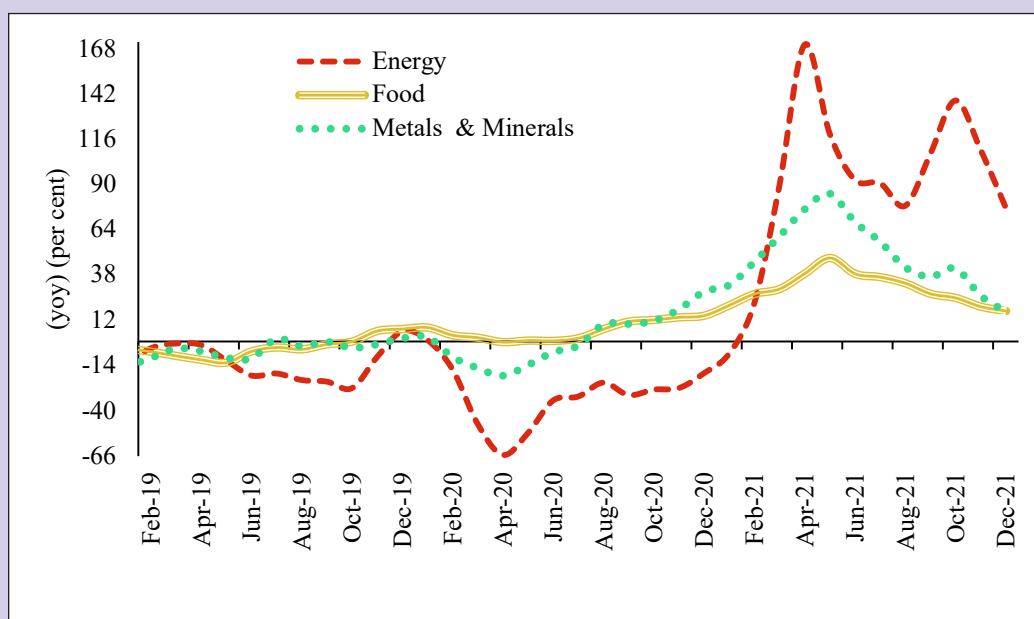
Note: Item level index for CPI diesel for vehicle was not available for March-May 2020.

5.32 Another reason for divergence is the lagging demand pick up. While production has gradually picked up in 2021-22 to reach the pre-pandemic levels, consumption demand is yet to normalise fully. With weak pass on, the divergence between WPI and CPI is increasing but is expected to wane gradually with the weakening of the base effect.

### Box 4: Global commodity prices and domestic inflation

International commodity prices rose sharply during the second half of 2020 and 2021. Fluctuations have been more in energy prices. After registering negative growth during the COVID-19 period, the energy index has recorded triple digit growth in 5 out of 12 months since January 2021 (Figure 4A). Food and metals and mineral prices have shown double digit growth during the current year.

**Figure 4A: Year on year growth in international commodity price indices**



Source: World Bank commodity price indices

While inflation in food items in India remained under control because of supply-side management, high global prices of manufacturing items have had an impact on the domestic prices, especially basic metals. The rise in demand for vehicles, manufactured goods, and pickup in construction activities have led to the rise of global aluminium prices. Due to environmental concerns, China, a major exporter of aluminium, has curtailed its production.

Copper prices have increased through the initial months of 2021. The increase in prices is also because of extraordinary global uptake in consumer goods and demand from China due to its enhanced investment in infrastructure and construction. Falling inventories and threats of strikes in Chile and Peru has elevated production risks and created pressure on copper prices (World Bank, 2021).

The initial surge of iron ore prices largely reflected the robust demand for steel production in China, leading to higher iron ore imports. However, recently decline in prices has been observed. Iron ore supplies have improved in recent months after the earlier weather disruptions in top exporter Australia and coronavirus outbreaks in number two shipper Brazil.<sup>3</sup>

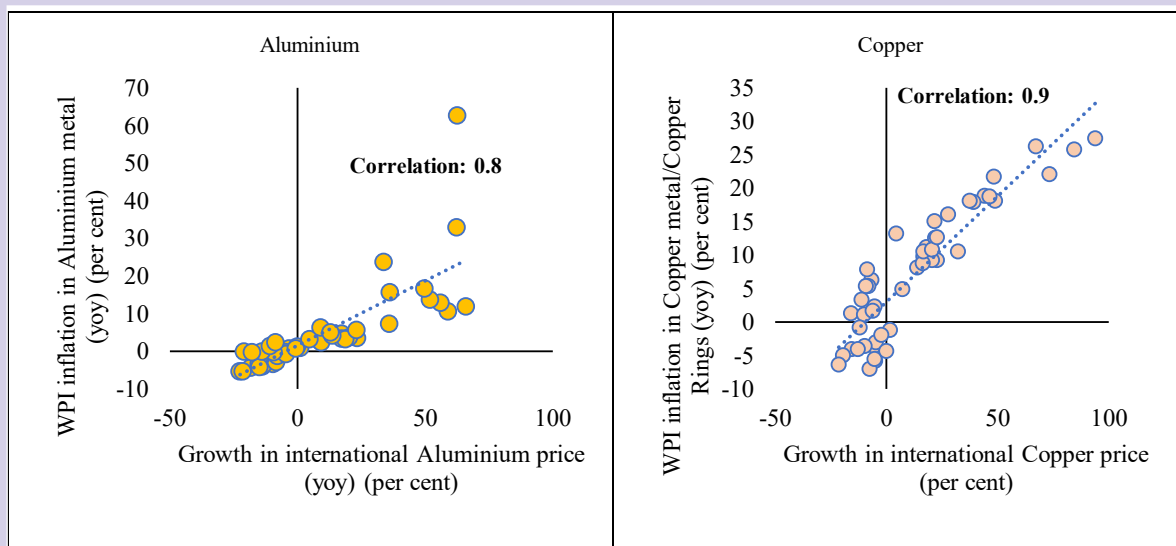
<sup>3</sup><https://www.reuters.com/world/americas/iron-ore-makes-unruly-retreat-more-normal-price-levels-russell-2021-09-20/>

Tin prices surged by more than 33 per cent in the first quarter, reaching a 10-year high in March 2021. Prices were lifted by buoyant demand for tin solder in consumer electronics, as well as supply disruptions due to lockdowns in Bolivia, Peru, and Malaysia, voluntary production cuts in Brazil and Indonesia, and political turmoil in Myanmar (World Bank, 2021a).

International cotton prices have been showing an upward trend since May 2020 and have reached levels higher than those witnessed in the last ten years. Cotton Index price which stood at \$1.40/kg in April 2020, has sharply risen to \$2.79/kg in November 2021, though it has reduced to \$2.65/kg in December 2021. The strengthening of prices of cotton is owing to the improvement in demand for cotton after COVID-19 related contraction witnessed in 2020 (World Bank, 2021b).

Domestic inflation as measured through WPI of related items have been highly correlated with growth in the international prices of these commodities. The inflation in domestic aluminium and copper prices is positively and highly correlated with international prices (Figure 4B).

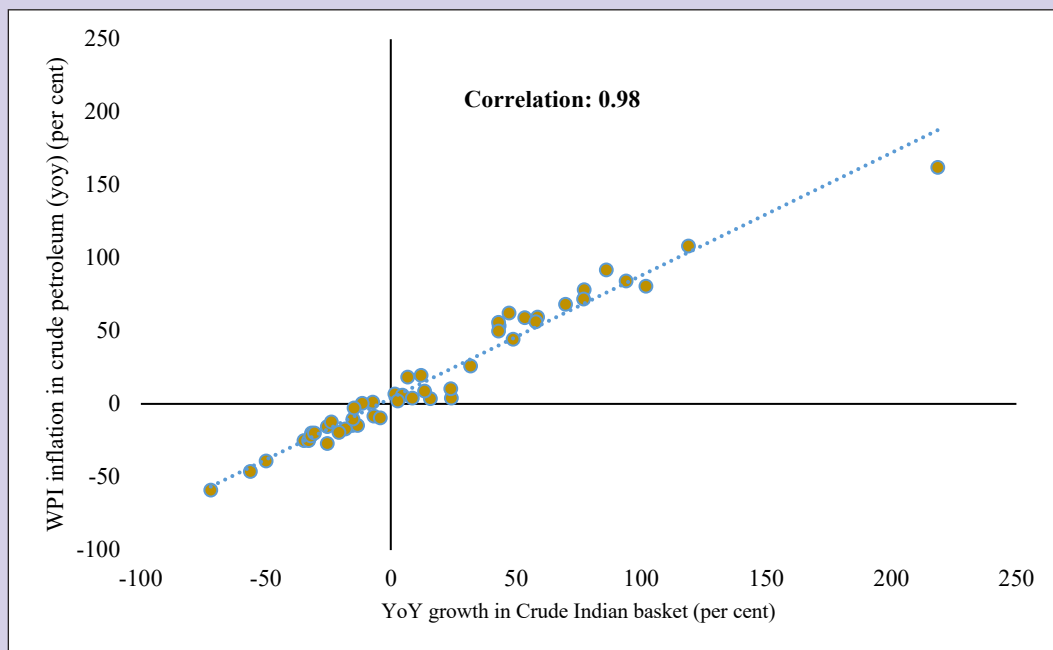
**Figure 4B: International inflation in Aluminium, Copper and WPI inflation in related items (January 2018-December 2021)**



Source: World Bank and OEA, DPIIT

India imports most of its consumption of crude oil. As expected, domestic crude oil prices are exclusively related to Indian crude basket prices (Figure 4C). WPI inflation in crude petroleum has a correlation of 0.98 with the YoY growth in price of Indian basket of crude oil.

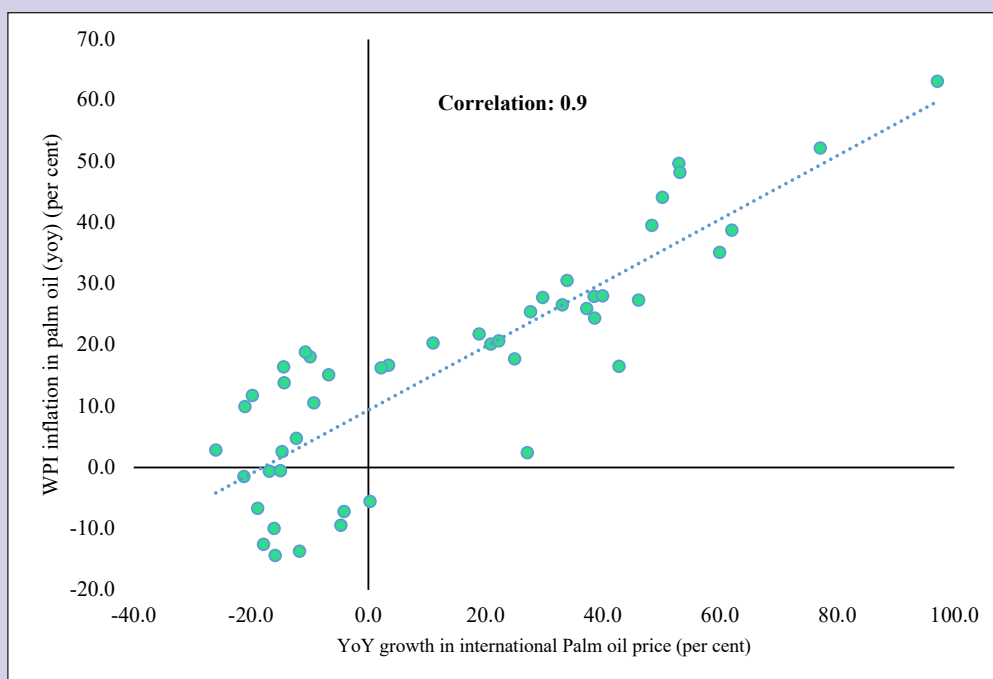
**Figure 4C: International inflation in Crude oil and WPI inflation in crude petroleum (January 2018-December 2021)**



Source: PPAC and OEA, DPIIT

India also imports substantial share its consumption of edible oils. Any change in international prices of palm oil gets transmitted into domestic prices as their correlation is around 0.9. (Figure 4D).

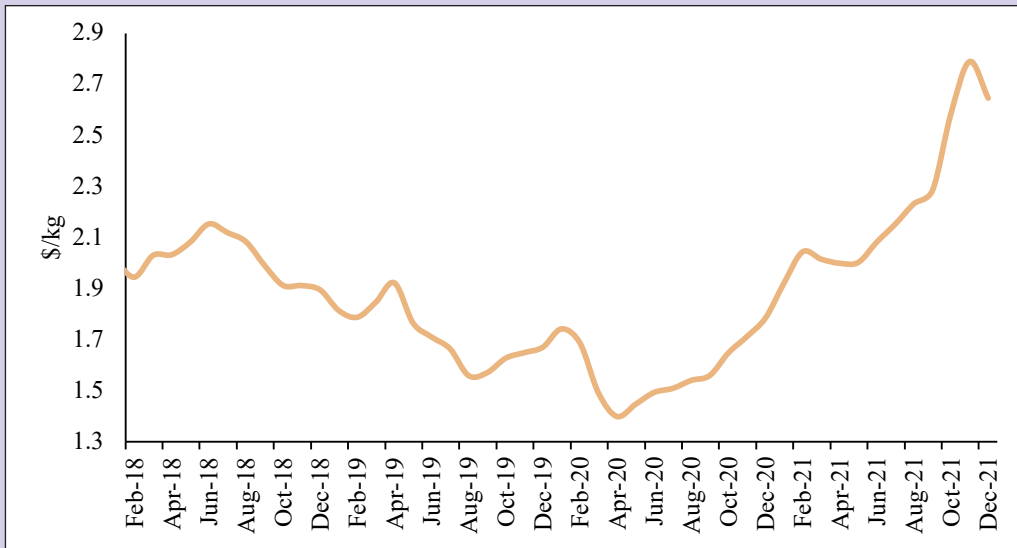
**Figure 4D: WPI inflation and international inflation in Palm oil (January 2018 – December 2021)**



Source: World Bank and OEA, DPIIT

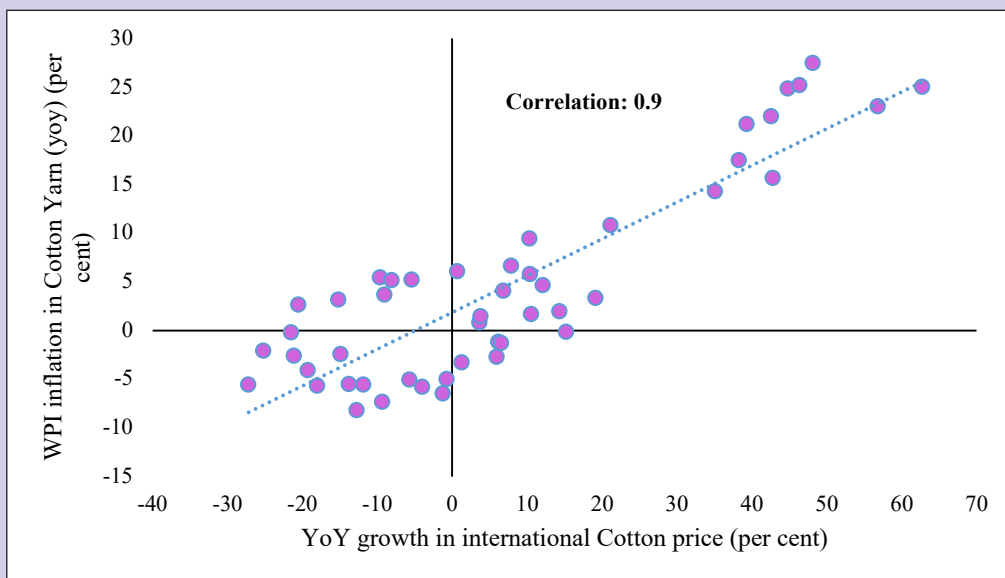
India is a major producer, consumer, and exporter of cotton. Therefore, the prices of domestic cotton and international prices are closely linked. The following figure shows the trends in international cotton prices. Figure 4F shows the high correlation (0.9) between WPI inflation in cotton yarn and international inflation in raw cotton.

**Figure 4E: International cotton price (A Index)**



Source: World Bank

**Figure 4F: WPI inflation in Cotton Yarn and international inflation in Cotton (January 2018 – December 2021)**



Source: World Bank and OEA, DPIIT

The high inflation rate reported in the manufactured Group in the WPI is therefore significantly attributable to “imported inflation” resulting from high prices of imported inputs. High freight costs and longer delivery times further exacerbated the price pressure on imported inputs.

## HOUSING PRICES

5.33 The residential housing sector was also affected by COVID-19 induced restrictions through both supply and demand channels. Amidst initial COVID-19 restrictions, not only construction of new houses slowed down, but launch of new housing projects also got delayed. With the loss of income, uncertainty about future income, and stay at home orders, home buyers delayed their housing purchases. After the initial COVID-19 induced restrictions were removed, transactions in housing properties increased significantly, possibly because of pent up demand and improvement in affordability in response to measures taken by government during the pandemic, such as lower interest rates, reduction in circle rates, and cut in stamp duties, that made houses affordable to buyers (Box 5). Besides, several major banks, mortgage companies, and housing finance companies have significantly reduced their interest rates on home loans, that fueled the revival in housing demand. During second COVID-19 wave (April-June, 2021), transactions of housing properties were once again impacted adversely, but not as much as it was seen during first COVID-19 wave (April-June, 2020).

5.34 National Housing Bank (NHB) RESIDEX HPI@Assessment Prices index (Base 2017-18) captures<sup>4</sup> the prices of residential housing properties for the transactions through primary lending institutions. Data on composite index for prices and transaction records from NHB have been used to analyze the impact of first and second COVID-19 wave on the housing transactions and prices across a sample of 12 cities.

### Box 5: Recent measures taken by government to enhance housing affordability

- Reduction in circle rates and stamp duties by various state governments like Delhi, West Bengal, Maharashtra to boost housing sales.

#### Tax benefits

- Tax holiday to affordable housing projects until March 31, 2022.
- Eligibility for tax deductions for affordable housing announced in the 2019-20 budget has been extended till March 2022. This tax deduction can be of up to 1.5 lakh rupees and will be provided on interest paid on loans for self-occupied house owners (Budget 2021-22).

#### Schemes

#### Pradhan Mantri Awas Yojana – Urban (PMAY-U)

- PMAY-U aims to address urban housing shortage among the Economically Weaker Section (EWS)/

<sup>4</sup>NHB RESIDEX tracks the movement in prices of residential properties in select cities on quarterly basis. From the April-June, 2018 quarter the base year has been shifted to FY 2017-18. The revamped NHB RESIDEX is wider in its geographic coverage and captures two Housing Price Index (HPIs) viz. HPI @ Assessment Prices and HPI @ Market Prices for Under Construction Properties, both for 50 cities. The current data sources are valuation data of Banks and HFCs for HPI @ Assessment Prices and primary & secondary market data for HPI @ Market Prices for Under Construction Properties. The coverage is spread across 21 states in India, including 18 State/UT capitals and 33 smart cities. The housing prices are classified on the basis of carpet area size at city level (INR/sq.ft.) for units under three product category levels namely ≤60 sq.m., >60 & ≤110 sq.m., and >110 sq.m. The indices are computed using Laspeyres Methodology, followed by calculation of a four Quarter Weighted Moving Average with application of dynamic weights at product category level and static base year weights on the weighted moving average product category level prices, across all the quarters starting from the new base year.

Low Income Group (LIG) and Middle Income Group (MIG) categories including the slum dwellers by ensuring a pucca house to all eligible urban households by the year 2022.

- Affordable Rental Housing Complexes (ARHCs) for urban migrants/ poor as a sub-scheme under Pradhan Mantri Awas Yojana – Urban (PMAY–U). Existing vacant government funded housing complexes will be converted in ARHCs through Concession Agreements for 25 years. Concessionaire will make the complexes livable by repair/retrofit and maintenance of rooms and filling up infrastructure gaps like water, sewer/ septage, sanitation, road etc. States/UTs will select concessionaire through transparent bidding. Complexes will revert to urban local bodies after 25 years to restart next cycle like the earlier one or run on their own. In addition, special incentives like use permission, 50 per cent additional Floor Area Ratio (FAR)/Floor Space Index (FSI), concessional loan at priority sector lending rate, tax reliefs at par with affordable housing etc. will be offered to private/ public entities to develop ARHCs on their own available vacant land for 25 years.

### **Credit Linked Subsidy Scheme for Middle Income Group**

- The Credit Linked Subsidy Scheme for Middle Income Group (annual Income between Rs 6 - 18 lakhs) being implemented since January 2017, was extended up to March 2021 to benefit 2.5 lakhs middle income families with targeted investment of over Rs 70,000 crore in housing sector under the Atma Nirbhar Programme announced in May 2020. This was also expected to stimulate demand for steel, cement, transport and other construction materials.

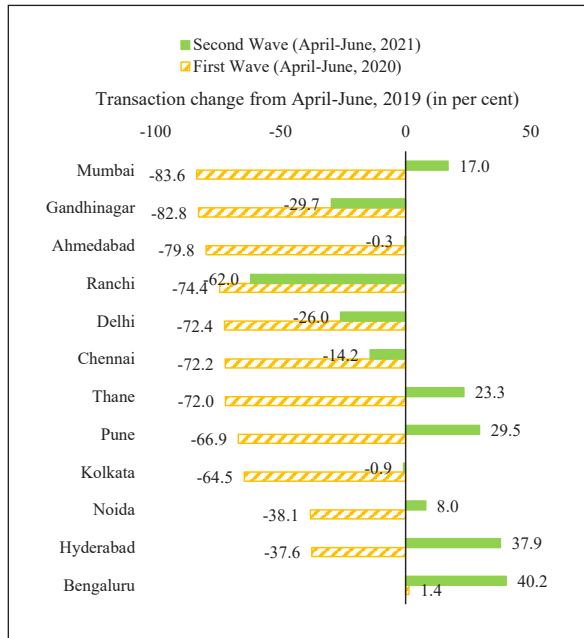
5.35 It can be broadly observed from Figure 21 A and 21 B that the response of housing transactions to COVID-19 shock is much higher than the response of housing prices. This implies that shocks to housing sector adjust more through changes in transactions than prices. As price response remains relatively lower than the response of transactions therefore transactions are better indicator to gauge sentiments in the housing market. While house transactions mostly declined during the COVID-19 shocks, their prices did not fall in most of the selected cities, some even increased.

5.36 Further, decline in housing transactions have also been much less during second COVID-19 wave than the decline during first COVID-19 wave. Figure 21 A compares the change in transactions in first COVID-19 wave and during the second-COVID-19 wave from the pre-pandemic levels (April-June, 2019). During first COVID-19 wave housing transactions declined in almost all selected cities. However, during second wave of COVID-19, the housing transactions in many cities such as Mumbai, Thane, Pune, Noida, Hyderabad, and Bengaluru increased relative to the pre-pandemic levels. In cities such as Gandhinagar, Ahmedabad, Chennai, Ranchi, Delhi & Kolkata the housing transactions declined during second COVID-19 wave over the pre-pandemic levels. However, this decline has been much less than the decline during the first COVID-19 wave.

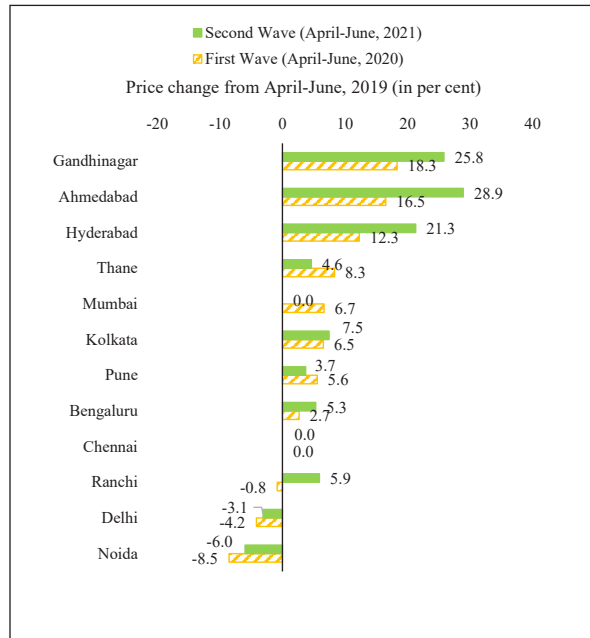
5.37 Unlike the decline in quarterly housing transactions during first and second COVID-19 waves, the impact of the COVID-19 shock on the prices of residential properties was not uniform across the cities. Figure 21B compares the change in price index during the first COVID-19 wave and during the second-COVID-19 wave over the pre-pandemic level. During the first COVID-19 wave, the housing prices increased in cities such as Gandhinagar, Ahmedabad,

Hyderabad, Thane, Mumbai, Kolkata, Pune and Bengaluru over the pre-pandemic level, and the housing prices decreased in Delhi, Noida and Ranchi. Similar trends were also visible during the second COVID-19 wave over the pre-pandemic level. The housing prices in cities such as Ahmedabad, Hyderabad, Gandhinagar and Ranchi continued to increase despite the COVID-19 shocks.

**Figure 21A: Change in housing transactions in Q1 FY21 (First COVID-19 wave) and Q1 FY22 (Second COVID-19 wave) over the pre-pandemic levels of Q1 FY20**



**Figure 21B: Change in housing prices index in Q1 FY21 (First COVID-19 wave) and Q1 FY22 (Second COVID-19 wave) over the pre-pandemic levels of Q1 FY20**

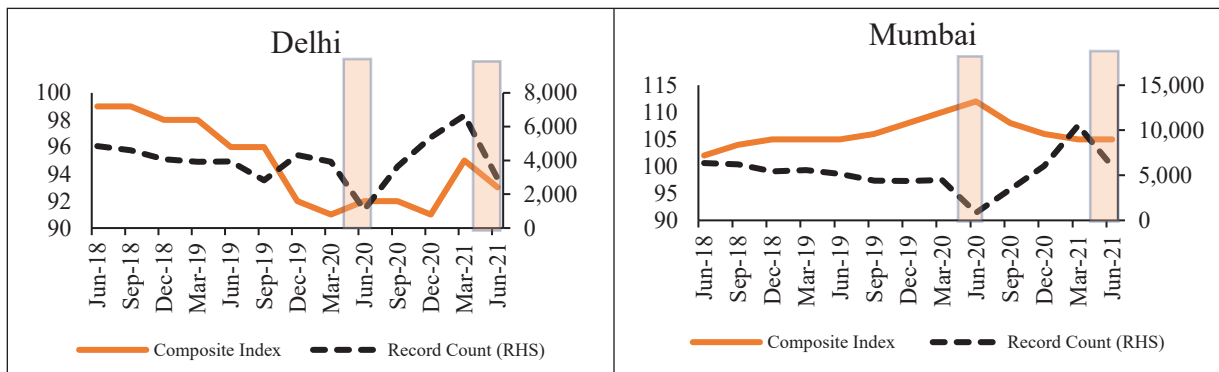


Source: NHB

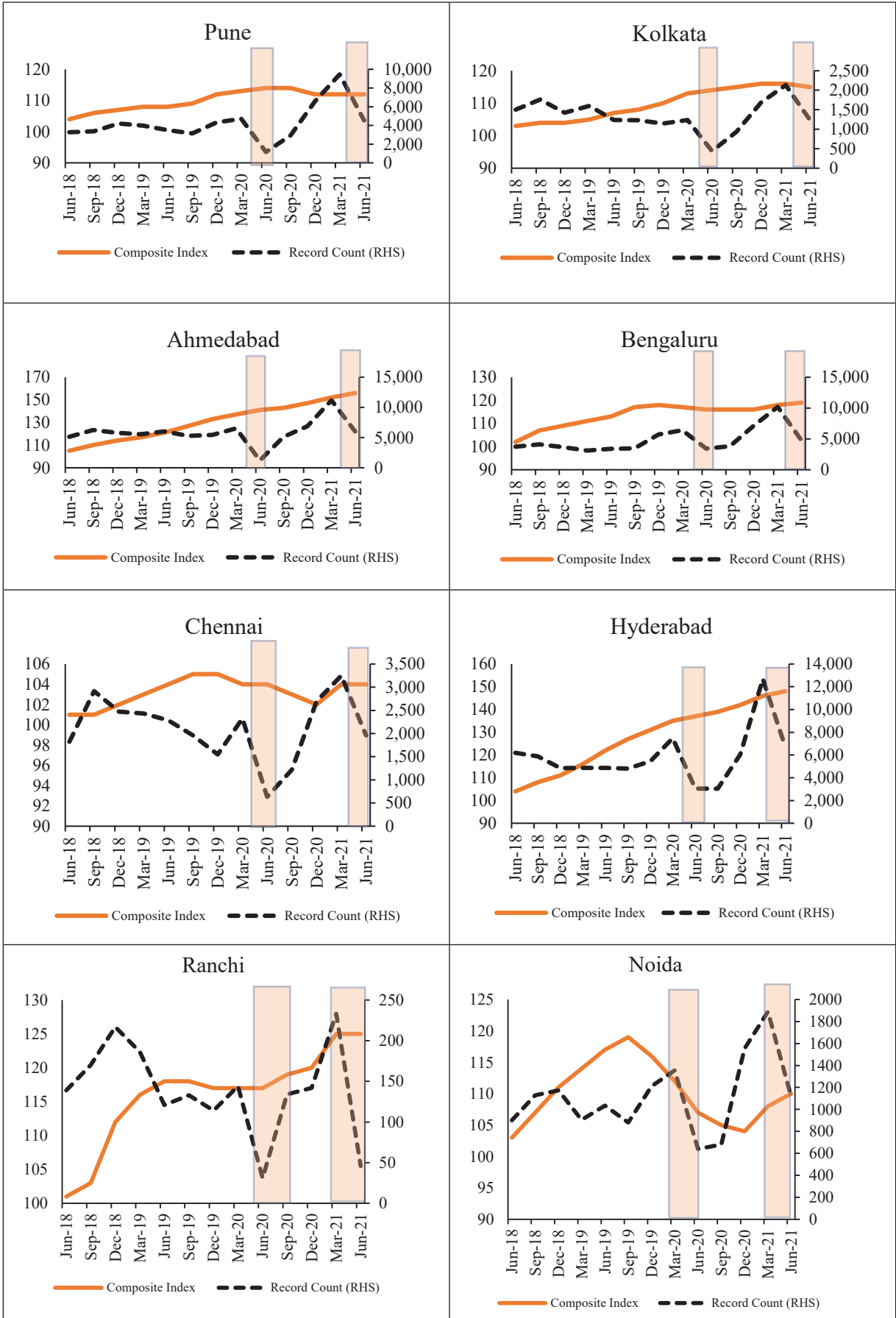
5.38 Between two COVID-19 waves, from June 2020 to April 2021, housing transactions recovered swiftly, as quarterly purchases crossed even the pre-pandemic levels for all the selected cities (Figure 22). This boost in housing demand is possibly because of pent up demand and measures taken by the government to increase affordability. The number of unsold residential units have also witnessed significant drops during the second wave of the pandemic.

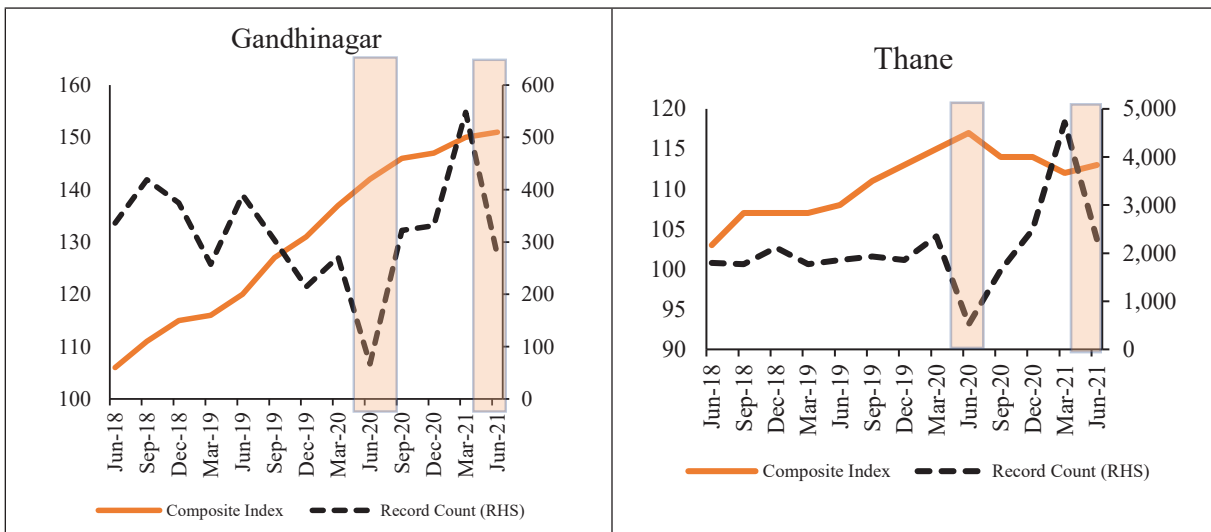
Figure 23 shows carpet area prices by size of residential properties in selected cities.

**Figure 22: Recovery between COVID-19 waves reflected in record count for 12 major cities**



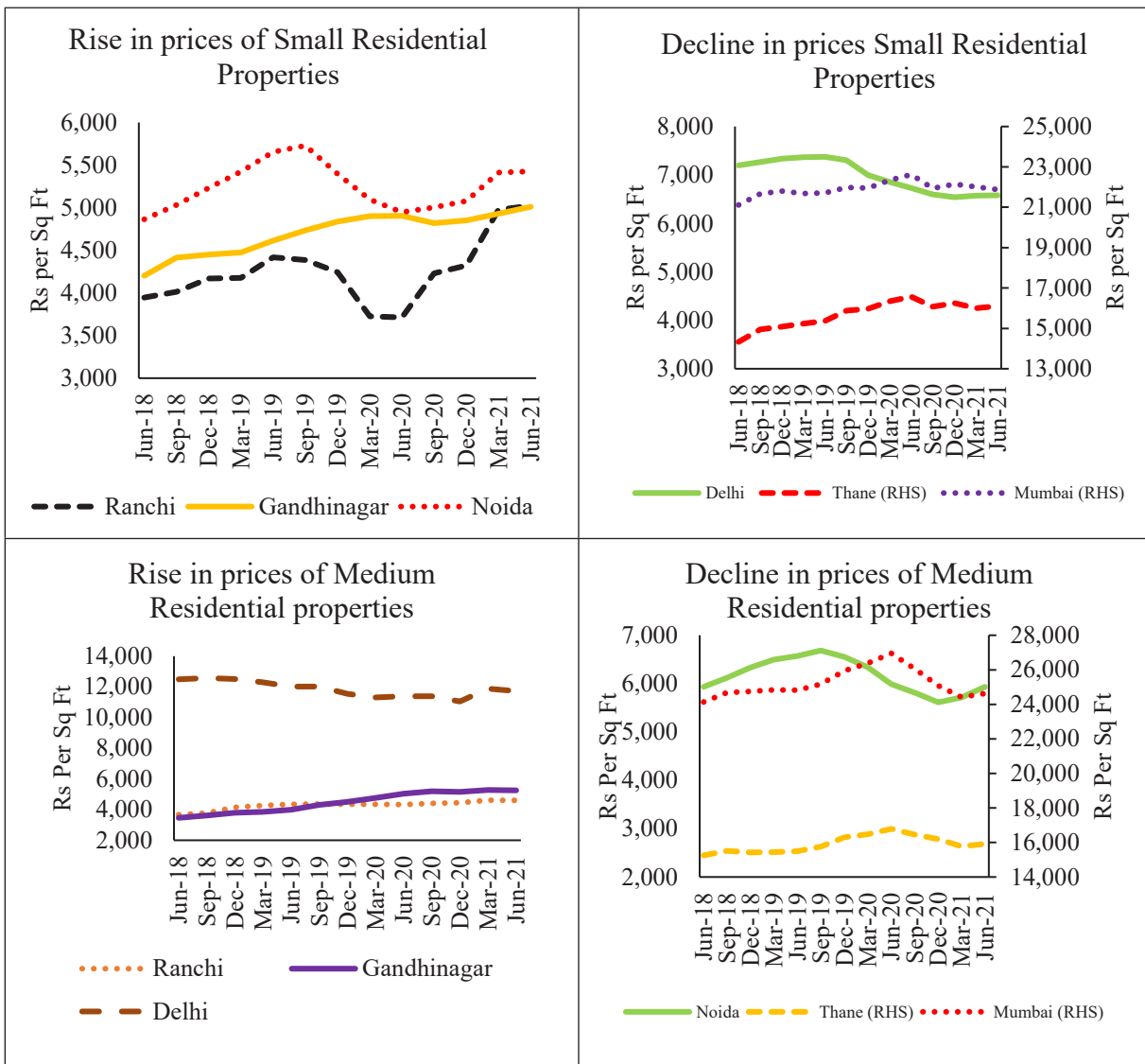


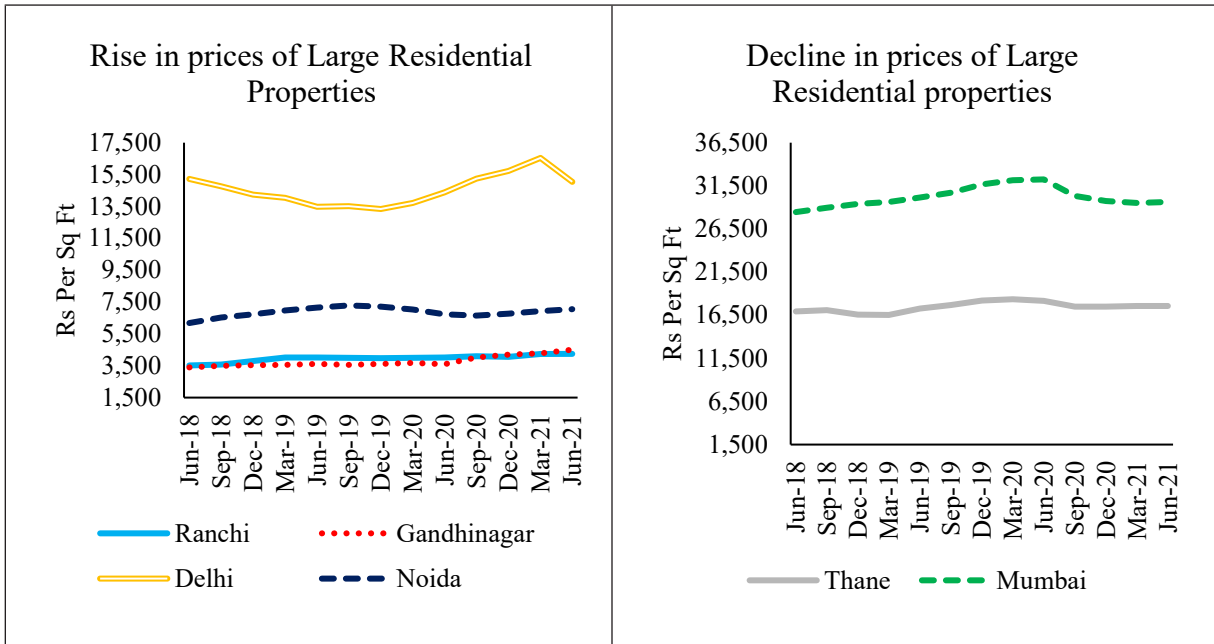




Source: NHB

Figure 23: Carpet Area Prices by Size of Residential Properties





Source: NHB

Note: Small size = [ $\leq 60$  sq.mt.(646 sq.ft)]; Medium= [ $>60$  sq.mt.(646 sq.ft) and  $\leq 110$  sq.mt.(1184 sq.ft)]; Large properties ( $>110$  sq.mt.(1184 sq.ft)).

## PHARMACEUTICAL PRICING

5.39 Government regulates pricing of drugs to ensure availability and accessibility of medicines at affordable prices. National Pharmaceutical Pricing Authority (NPPA), an attached office of the Department of Pharmaceuticals (DoP), is mandated to regulate the prices of drugs.

5.40 Several steps have been taken to ensure the affordability of drugs and medical devices. Ceiling prices for 355 medicines and 886 formulations were fixed for medicines under National List of Essential Medicines, 2015 (Schedule-I of Drug Price Control Order (DPCO), 2013) until 31 December 2021. Retail prices for approximately 1798 formulations were fixed under DPCO, 2013 till 31 December 2021. During the recent years, exercising extraordinary powers under DPCO, 2013 in public interest, prices of coronary stents and knee implants have also been fixed. NPPA also capped the trade margin up to 30 per cent on selected 42 anti-cancer non-schedule medicine on pilot basis in February, 2019.

### COVID-19 Initiatives:

- Based on recommendations of Standing Committee on Affordable Medicines and Health Products (SCAMHP), NITI Aayog, NPPA capped the trade margin for Oxygen Concentrators at 70 per cent on Price to Distributor (PTD) level on 3rd June 2021.
- Trade margins on Pulse Oximeter, Glucometer, Blood Pressure Monitor, Nebulizer and Digital Thermometer were also capped on July 13, 2021. As a result, most of the brands of these devices have dropped prices up to 89 per cent.
- Most of drugs used for COVID management are scheduled drugs for which ceiling price has been given by NPPA. Even in the case of a few non-scheduled medicines like Remdesivir,

which are part of COVID-19 protocol, on Government intervention, MRPs of various brands of Remdesivir have been reduced voluntarily by the major manufacturers/marketers.

- Multi-pronged approach is followed to monitor and coordinate equitable distribution of Remdesivir, Tocilizumab and Amphotericin.
- The availability of key medicines is also being monitored through regular surveys being conducted at chemist shops at various locations across the country by DCG(I). The same is also being supplemented w.e.f. May 2021 through weekly availability surveys of COVID-19 management drugs conducted by the Price Monitoring and Resource Units (PMRUs).

## LONG TERM PERSPECTIVE FOR MANAGEMENT OF SUPPLY SIDE FACTORS

Given the importance of supply-side factors in having a predominance in determination of inflation in India, long-term policies are likely to help.

1. **Changing Production Patterns:** Encouraging farmers to shift from cultivation of rice and wheat to pulses and oilseeds would help ensure that the country is self-reliant in pulses and oilseeds and also assist in reducing import dependence. Shift in cultivation towards pulses would also enable the government to maintain realistic buffer stocks of rice and wheat. Recently, government has been prioritizing increasing production of pulses and oilseeds through area expansion, productivity through HYVs, MSP support and procurement.
2. **Calibrated Import Policy:** Knee jerk reactions to price rise of essential commodities like pulses and edible oils through frequent import duty/tariff revisions though providing immediate relief to the consumers in the way of lower prices, send wrong signals to domestic producers and create an environment of uncertainty. A long-term consistent approach is mandated. A step in this direction has been taken by the government where five year MoUs have been signed with Myanmar for annual import of 2.5 LMT of Urad and 1 LMT of Tur, with Malawi for annual import of 1 LMT of Tur, and MoU with Mozambique for annual import of 2 LMT Tur has been extended by another five years. These MoUs will ensure predictability in the quantity of pulses being produced abroad and exported to India, thus benefiting both India and the pulse exporting country.
3. **Focus on transportation and storage infrastructure for perishable commodities:** Better storage and supply chain management is required to ensure availability in lean season and reduced wastages of horticulture and other perishable essential commodities to reduce the seasonal spikes in prices for consumers, glut for the farmers in times of good harvests due to lack of marketing infrastructure, resulting in distress sales. Effective utilisation of Agriculture Infrastructure Fund for investment in viable projects for post-harvest management infrastructure for perishable commodities can help improve agriculture infrastructure in the country. Schemes like Operation Green and Kisan Rail need to be exploited further to protect the interests of the farmers as well as the consumers .

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