

Prices and Inflation

CPI-Combined (C) inflation has moderated since 2013-14. However, inflation dynamics have changed considerably in 2020. Overall, headline CPI inflation remained high during the COVID-19 induced lockdown period and subsequently, due to the persistence of supply side disruptions. The rise in inflation was mostly driven by food inflation, which increased to 9.1 per cent during 2020-21 (Apr-Dec). Due to COVID-19 induced disruptions, an overall increase in the price momentum is witnessed, driving inflation since April 2020, whereas positive base effect has been a moderating factor. The difference in rural-urban CPI inflation, which was high in 2019, saw a decline from November 2019 that continued in 2020. Inflation ranged between 3.2 per cent to 11 per cent across States/UTs in 2020-21 (Jun-Dec) compared to (-) 0.3 per cent to 7.6 per cent in the same period last year. Thali prices for both vegetarian and non-vegetarian Thalis declined significantly in January-March 2020 before rising sharply during April to November in both rural and urban areas before easing in December 2020. The easing in CPI-C is expected to ease Thali prices going forward.

The Survey finds that sole focus on CPI-C inflation may not be appropriate for four reasons. First, food inflation, which contributes significantly to CPI-C is driven primarily by supply-side factors. Second, given its role as the headline target for monetary policy, changes in CPI-C anchor inflation expectations. This occurs despite inflation in CPI-C being driven by supply-side factors that drive food inflation. Third, several components of food inflation are transitory with wide variations within the food and beverages group. Finally, food inflation has been driving overall CPI-C inflation due to the relatively higher weight of food items in the index. While food habits have undergone revisions over the decade since 2011-12, which is base year of CPI, the same is not reflected in the index yet. The base year of CPI therefore needs to be revised to overcome the measurement error that may be arising from the change in food habits. For all these reasons, a greater focus on core inflation is warranted. Further, given the significant increases in e-commerce transactions, new sources of price data capturing e-commerce transactions must get incorporated in the construction of price indices. During the year, the government took several measures to make crucial drugs for COVID-19 treatment available at affordable prices, to stabilise prices of sensitive food items like banning of export of onions, imposition of stock limit on onions, easing of restriction on imports of pulses etc. However, consistency in import policy of sensitive food items warrants attention as frequent changes in import policy of pulses and edible oils adds to confusion and delays. To rein in the vegetable inflation, review of relevant buffer stock policies is essential. To avoid supply-side disruptions that cause inflation seasonality in vegetables, food, CPI-C and in inflation expectations, a system needs to be developed to reduce wastages and ensure timely release of stock.

INTRODUCTION

5.1 Year 2020 was unprecedented with the global pandemic of COVID-19 induced social distancing disrupting economic activity globally. At the domestic level, two opposing forces were at play. On the one hand, there was a dampening of demand owing to lower economic activity. On the other hand, supply chain disruptions have caused spikes in food inflation that have continued to persist during the unlocking of the economy, though the effect has softened in the recent months. Overall, headline CPI inflation remained high during the lockdown period and subsequently as well, due to the persistence of supply side disruptions (Table 1). At the global level, inflation remained benign on the back of subdued economic activity as a result of COVID-19 outbreak and sharp fall in international crude oil prices in advanced economies. In Emerging Markets and Developing Economies (EMDEs), there was slight fall in inflation on account of weaker economic activity, though there has been uptick in inflation in some economies ending at similar levels as in the previous year (IMF, 2020) (Figure 1).

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

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21*
WPI	5.2	1.2	-3.7	1.7	3.0	4.3	1.7	-0.1 (P)
CPI - C	9.4	5.9	4.9	4.5	3.6	3.4	4.8	6.6 (P)^
CPI - IW	9.8	6.4	5.6	4.2	2.9	5.6	7.3	5.5^
CPI - AL	11.6	6.6	4.4	4.2	2.2	2.1	8.0	7.0
CPI - RL	11.5	6.9	4.6	4.2	2.3	2.2	7.7	6.8

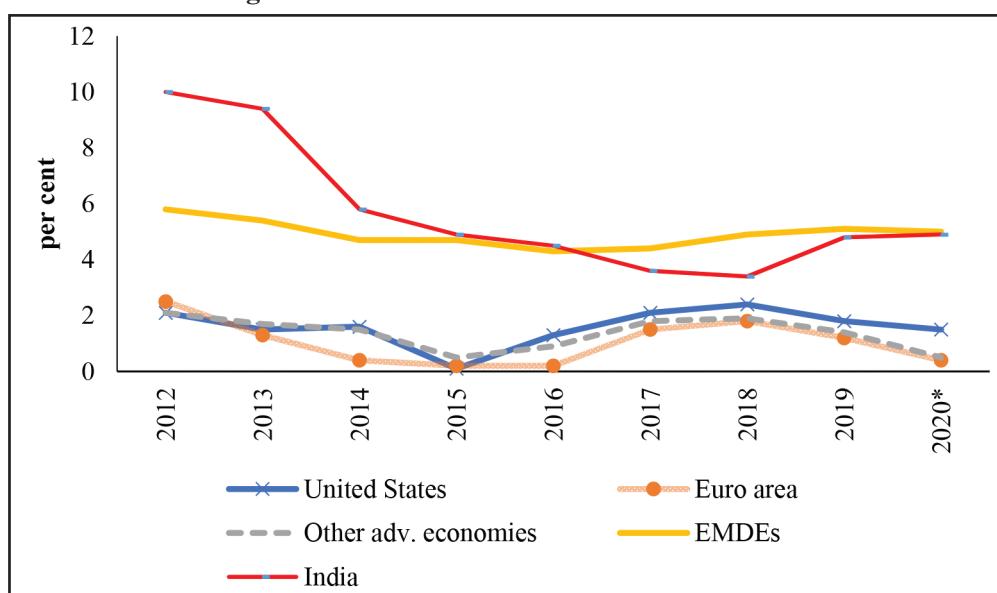
Source: Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade (DPIIT) for Wholesale Price Index, National Statistical Office (NSO) for CPI-C and Labour Bureau for CPI-IW, CPI-AL and CPI-RL.

Notes: #CPI-IW inflation for 2020-21 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.

* April to December 2020 for WPI, CPI-C and April- November 2020 for others.

^ CPI-C inflation for the months of April-May, 2020 are imputed, which are based on limited set of observations due to COVID-19 pandemic.

Figure 1: Annual Average Consumer Price Inflation in Advanced Economies and EMDEs



Source: World Economic Outlook, October 2020 Update, IMF

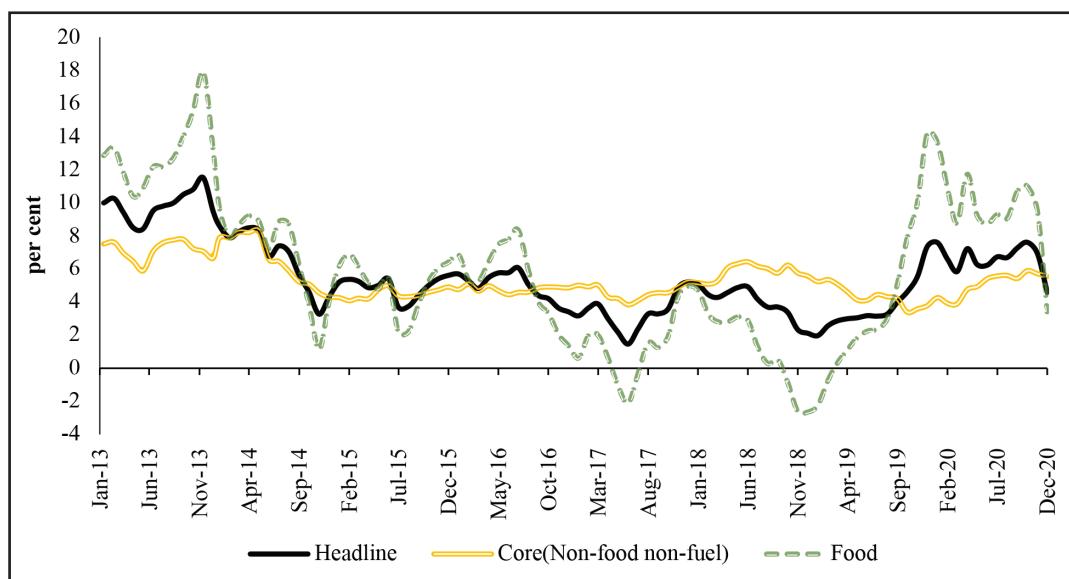
Note: *The figure for 2020 is projected by IMF

Advanced Economies include 16 economies and EMDEs include 156 economies as per IMF classification

CURRENT TRENDS IN INFLATION

5.2 Headline inflation based on CPI-Combined (CPI-C) was on a downward path from 2014 to 2018. Though a rising trend was observed since 2019, a moderation in inflation is clearly visible now (Figure 2). The average CPI-C inflation, which was 5.9 per cent in 2014-15, fell continuously to 3.4 per cent in 2018-19 and recorded 4.8 per cent in 2019-20. It however increased to 6.6 per cent in 2020-21 (Apr-Dec) before easing to a 15-month low of 4.6 per cent in December 2020. Within various groups of CPI-C, the increase in inflation in the current year was mainly driven by rise in food inflation, which increased from 0.1 per cent in 2018-19 to 6.7 per cent in 2019-20 and further to 9.1 per cent in 2020-21 (Apr-Dec), owing to build up in vegetable prices. However, the swift steps taken by the Government eased food inflation significantly to 3.4 per cent in December 2020 from a high of 11 per cent in October 2020. CPI Core (non-food non-fuel) inflation declined from 5.8 per cent in 2018-19 to 4.0 per cent in 2019-20 and averaged 5.4 per cent in 2020-21 (Apr-Dec) (Table 2). Rise in core inflation in the current year is mainly on account of miscellaneous group which primarily consists of services. Inflation in transport & communication, which have maximum weightage in the miscellaneous group, increased to 9.4 per cent in the current year as compared to 2.4 per cent in 2019-20. Further, volatility in gold and silver prices also pushed core inflation up. However, at major group level of CPI-C, significant fall has been observed in housing inflation from 6.7 per cent in 2018-19 to 4.5 per cent in 2019-20 and further to 3.3 per cent in 2020-21 (Apr-Dec).

Figure 2: Trends in CPI-C Headline, Core and Food inflation



Source: NSO.

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

Description	Weights	2018-19	2019-20	2020-21#	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20 (P)
All Groups	100	3.4	4.8	6.6	6.7	6.7	7.3	7.6	6.9	4.6
CFPI*	39.06	0.1	6.7	9.1	9.3	9.1	10.7	11.0	9.5	3.4
Food & beverages	45.86	0.7	6.0	8.4	8.5	8.3	9.8	10.1	8.9	3.9
Cereals & products	9.67	2.1	2.8	5.2	6.9	5.9	4.7	3.5	2.5	1.0
Meat & fish	3.61	4.0	9.3	16.3	17.3	16.5	17.5	18.6	17.0	15.2
Egg	0.43	2.3	4.5	13.4	7.7	10.1	15.6	21.7	20.4	16.1

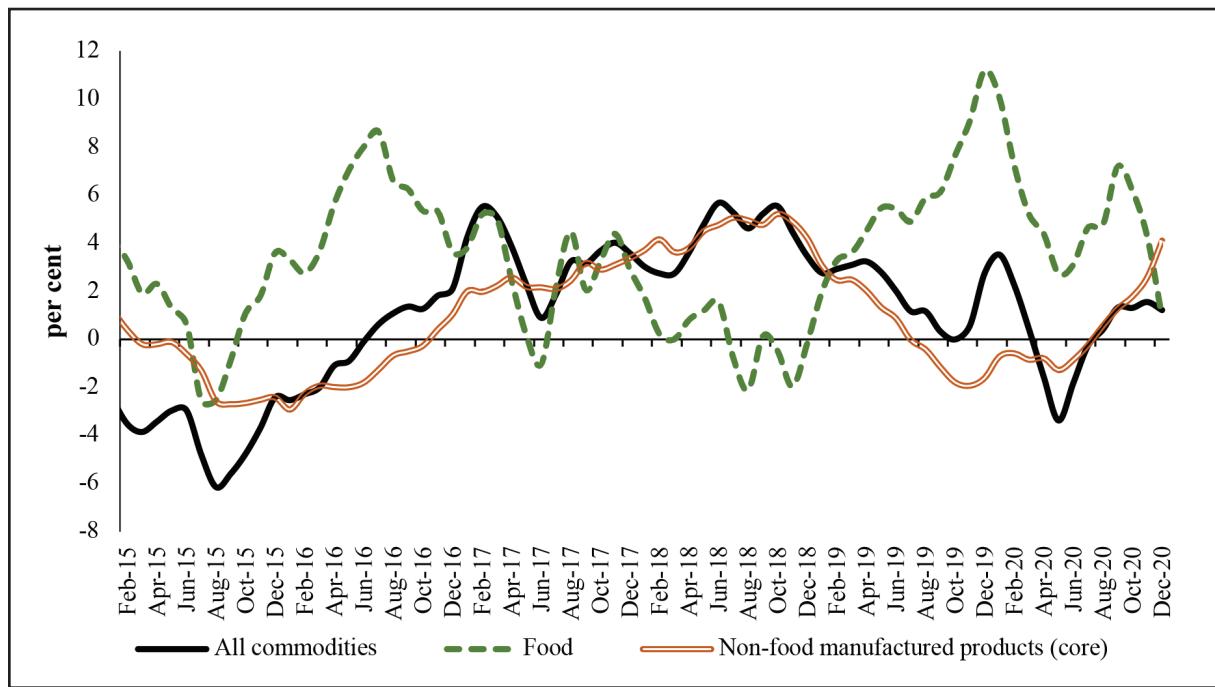
Description	Weights	2018-19	2019-20	2020-21#	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20 (P)
Milk & products	6.61	1.8	2.9	6.4	6.5	6.2	5.6	5.2	5.0	4.0
Oils & fats	3.56	2.1	2.9	14.0	12.2	12.4	13.4	15.2	17.9	20.0
Fruits	2.89	2.3	0.7	1.4	0.1	1.0	3.1	0.3	0.2	2.7
Vegetables	6.04	-5.2	21.3	11.0	11.1	11.5	20.8	22.1	15.5	-10.4
Pulses & products	2.38	-8.3	9.9	17.6	15.7	14.4	14.7	18.3	18.1	16.0
Sugar & confectionery	1.36	-7.0	0.8	3.5	3.6	3.9	2.7	1.5	1.0	0.5
Fuel & light	6.84	5.7	1.3	2.3	2.7	3.2	2.8	2.1	1.6	3.0
CPI Excl. Food & Fuel Group (Core)	47.3	5.8	4.0	5.4	5.6	5.6	5.4	5.9	5.7	5.5

Source: NSO.

Note: (P): Provisional, *Consumer Food Price Index, # April to December 2020

5.3 WPI inflation declined from 4.3 per cent in 2018-19 to 1.7 per cent in 2019-20 and further to (-) 0.1 per cent in 2020-21 (Apr-Dec). It remained negative from April to July 2020 and stood at 1.2 per cent in December 2020 (Figure 3). The decline in WPI inflation in the current year is mainly on account of fuel & power. Persistent volatility in the global crude oil prices during the year led to fall in inflation of major fuel products. WPI fuel & power inflation dropped sharply from 11.6 per cent in 2018-19 to (-) 1.8 per cent in 2019-20 and further to (-) 12.2 per cent in 2020-21 (Apr-Dec). WPI food inflation declined from 6.9 per cent in 2019-20 to 4.2 per cent in 2020-21 (Apr-Dec) and WPI core inflation increased to 0.8 per cent in 2020-21 (Apr-Dec) as compared to (-) 0.4 per cent in 2019-20 (Table 3).

Figure 3: Trends in WPI All commodities, Core and Food inflation



Source: Office of the Economic Adviser, DPIIT

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

Description	Weight	2018–19	2019–20	2020–21#	Jul–20	Aug–20	Sep–20	Oct–20	Nov–20 (P)	Dec–20 (P)
All commodities	100.0	4.3	1.7	-0.1	-0.2	0.4	1.3	1.3	1.6	1.2

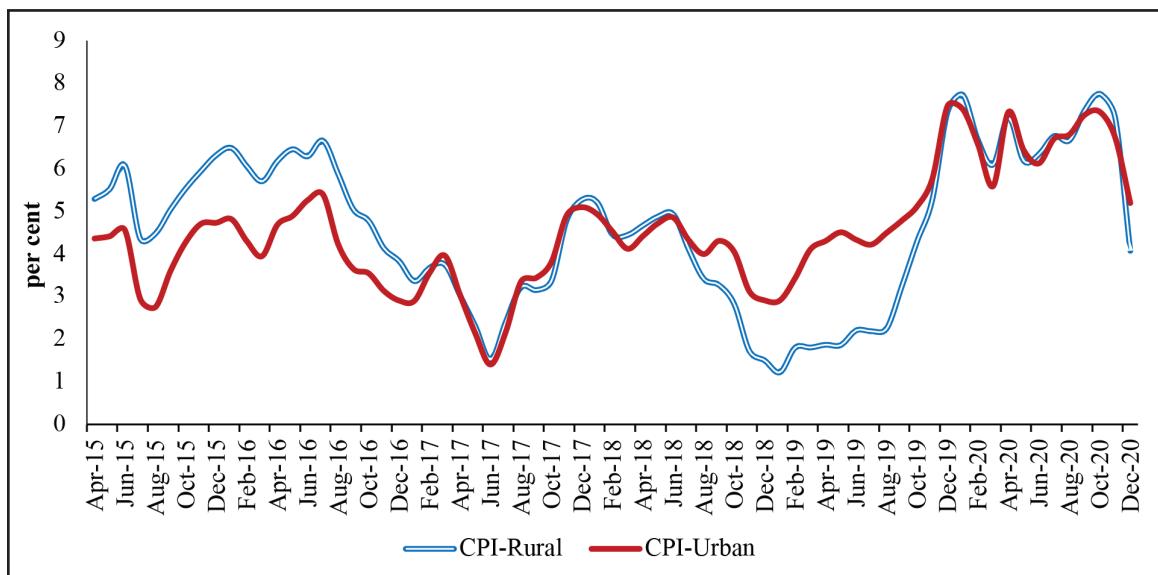
Description	Weight	2018-19	2019-20	2020-21#	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20 (P)	Dec-20 (P)
Food Index	24.4	0.6	6.9	4.2	4.7	4.8	7.2	6.2	4.3	0.9
Food articles	15.3	0.3	8.4	3.9	4.5	4.4	8.4	7.1	3.9	-1.1
Cereals	2.8	5.5	7.5	-1.4	0.7	-1.6	-3.7	-5.2	-5.5	-6.5
Pulses	0.6	-9.4	15.9	12.1	10.2	9.9	12.5	16.1	13.0	9.7
Vegetables	1.9	-8.4	31.2	7.1	8.2	7.2	38.1	26.7	12.2	-13.2
Fruits	1.6	-1.7	3.2	-1.3	-3.0	-0.3	-4.6	-4.3	-3.8	1.4
Milk	4.4	2.4	2.5	5.1	4.7	4.4	5.6	5.7	5.5	3.9
Egg, meat & fish	2.4	1.7	6.5	3.4	5.3	6.2	4.1	4.2	0.6	1.4
Food products	9.1	0.9	4.1	5.0	5.0	5.5	4.9	4.4	4.9	4.9
Vegetable and animal oils and fats	2.6	7.5	1.4	17.3	15.9	17.7	18.7	20.6	23.2	21.8
Sugar	1.1	-10.7	3.9	0.1	3.3	0.5	-0.8	-1.5	-0.8	-0.3
Fuel & power	13.2	11.6	-1.8	-12.2	-9.8	-9.1	-8.6	-11.1	-9.9	-8.7
Non-Food manufactured products (Core)	55.1	4.2	-0.4	0.8	-0.2	0.6	1.3	1.8	2.6	4.1

Source: Office of the Economic Adviser, DPIIT.

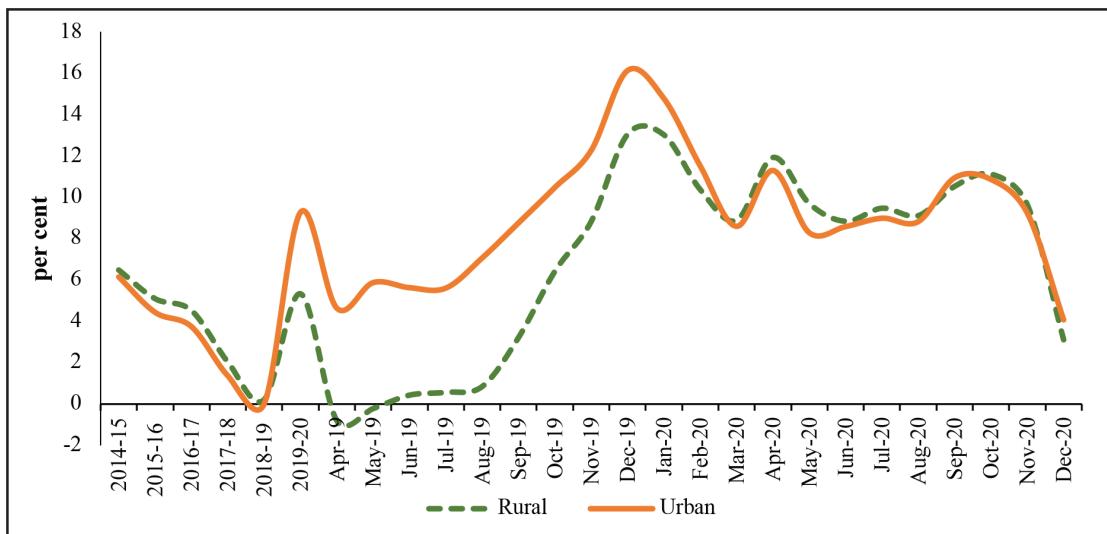
Note: P: Provisional, #April to December 2020.

5.4 The rural-urban difference in CPI inflation, which was high in 2019, saw a decline in 2020. From July 2018 to December 2019, CPI-Urban inflation was consistently above CPI-Rural inflation, mainly on account of the differential rates of food inflation between rural and urban areas witnessed during this period. However, in the current year, CPI-Urban inflation has moved closely with CPI-Rural inflation (Figure 4). Although food inflation in rural and urban areas has almost converged now (Figure 5), divergence in rural-urban inflation is observed in other components of CPI (Figure 6). Inflation in non-food components of CPI is higher in urban areas as compared to rural areas in the current year. While fuel & light inflation is (-) 0.1 per cent in rural areas, it is 6.7 per cent in urban areas. The rural-urban differential in other components is in the range of 1.6 to 2.3 percentage points, except housing, which is not compiled for rural areas.

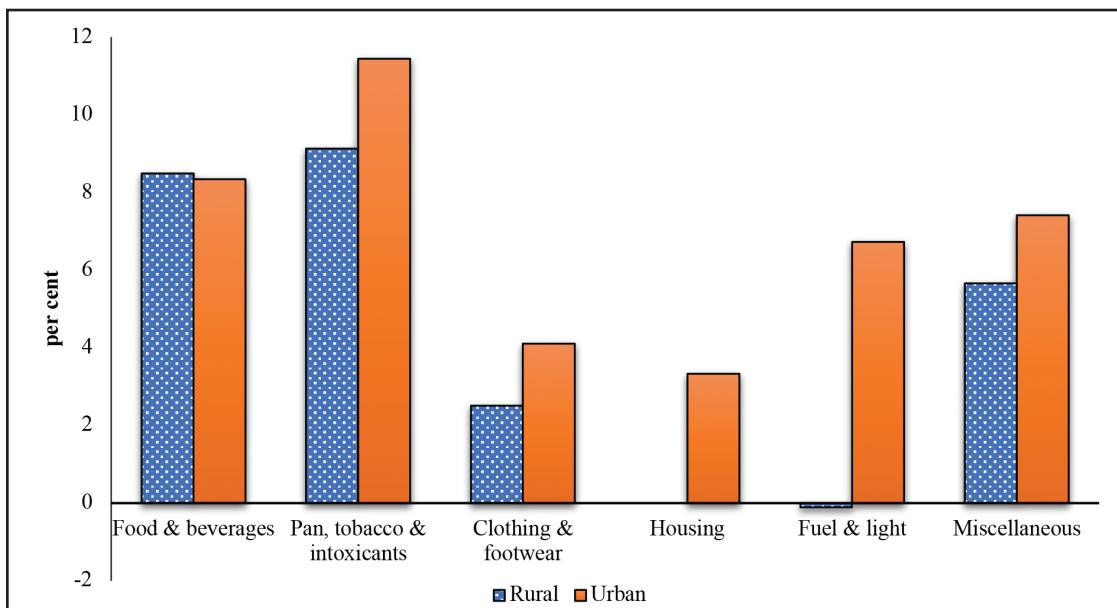
Figure 4: CPI Rural and Urban inflation



Source: NSO.

Figure 5: Rural and Urban CPI food inflation

Source: NSO

Figure 6: Component-wise rural and urban inflation in 2020-21 (Apr-Dec)

Source: NSO

5.5 CPI-IW is a price index released by the Labour Bureau to measure the impact of price rise on the cost of living for working class families spread across certain select industries. The base year of CPI-IW has been revised from its earlier 2001 to a more recent base year of 2016 (Box 1).

Box 1: Base Revision of Consumer Price Index for Industrial Workers (CPI-IW)

The CPI-IW is compiled and disseminated by the Labour Bureau on a monthly basis. It measures changes in the retail prices of a fixed basket of goods and services being consumed by an average working-class family. Apart from serving as a guide for policy formulations,

these index numbers are utilized for fixing/revising wages, regulating the dearness allowances paid to large number of manual workers and Central/ State Govt. employees. To capture the latest consumption pattern of working-class family, Labour Bureau has revised the base year of the existing CPI-IW series 2001=100 to a more recent base year 2016=100.

The new series of CPI-IW covers the industrial workers from the existing seven sectors viz. Factories, Mines, Plantation, Railways, Public Motor Transport Undertakings, Electricity Generating & Distributing Establishments and Ports & Docks. The new series has a wider coverage in terms of sample size, number of centres, markets/outlets, items etc. The major changes in the new series are summarized in the following Table.

Refinements in CPI-IW base updation 2016

	Old series	New series
Base	2001=100	2016=100
Coverage of States/UTs	25	28
Coverage of Centres	78	88
Coverage of Markets	289	317
Working Class families covered in the base year survey	41040	48384
Number of Items	392	463
Compilation of Indices	Arithmetic Mean of price relatives	Geometric Mean of price relatives

As recommended by Technical Advisory Committee on Statistics of Prices and Cost of Living (TAC on SPCL), Labour Bureau has revised the classification of items in CPI-IW into different Groups and Sub-Groups in line with NSO's Classification of Individual Consumption by Purpose (COICOP). The revised six groups based on the COICOP classification and their respective weights for different series are as follows.

All India group weight distribution for different series of CPI-IW

Groups	Weights (%)		
	1982	2001	2016
Food & Beverages*	57.0	46.2	39.17
Pan, Supari, Tobacco & Intoxicants	3.15	2.27	2.07
Fuel & Light	6.28	6.43	5.5
Housing	8.67	15.27	16.87
Clothing & Footwear**	8.54	6.57	6.08
Miscellaneous	16.36	23.26	30.31
General Index	100.00	100.00	100.00

*Food and Beverages was Food Group during previous series.

**Clothing and Footwear was Clothing, Bedding and Footwear during previous series.

The food & beverages group and the miscellaneous group have been further divided into various sub-groups. The weights for the purpose of compilation of index numbers have been derived on the basis of average monthly family expenditure. The average budget derived from a family budget enquiry consisted of all items of expenditure reported by the families surveyed under Working Class Family Income & Expenditure Survey (WCFI&ES), 2016. The weight of food & beverages has declined over time whereas the weight of miscellaneous

group (mainly services) has increased substantially under 2016 series vis-à-vis earlier series. The linking factor for the two series is 2.88. Linking factor allows us to maintain continuity in the time series data on the price index. This would help in comparing the new series with the old one. The linking factor has been derived by taking the ratio of average of monthly indices of old series to new series for the period of 12 months (from September 2019 to August 2020).

INFLATION TREND: MOMENTUM AND BASE EFFECT

5.6 Inflation trends are usually interpreted using the twelve-month change in the index to eliminate the effect of seasonal fluctuations. However, one challenge with using the YoY change in inflation is that it does not distinguish between recent price changes and price changes a year before.

When changes in the CPI in the base month have a considerable effect on changes in YoY inflation, this is referred to as base effect. Base effects are therefore the contribution to changes in the annual rate of measured inflation from abnormal changes in the CPI in the base period. Hence, we need to distinguish whether changes in inflation are caused by price changes in the current month, or by extreme price changes in the base period (Central Bank of Iceland, 2007).

5.7 Arithmetically, the explanation of why π_{t-1} (YoY inflation in period $t-1$) moved to π_t (YoY inflation in period t) consists of two parts:

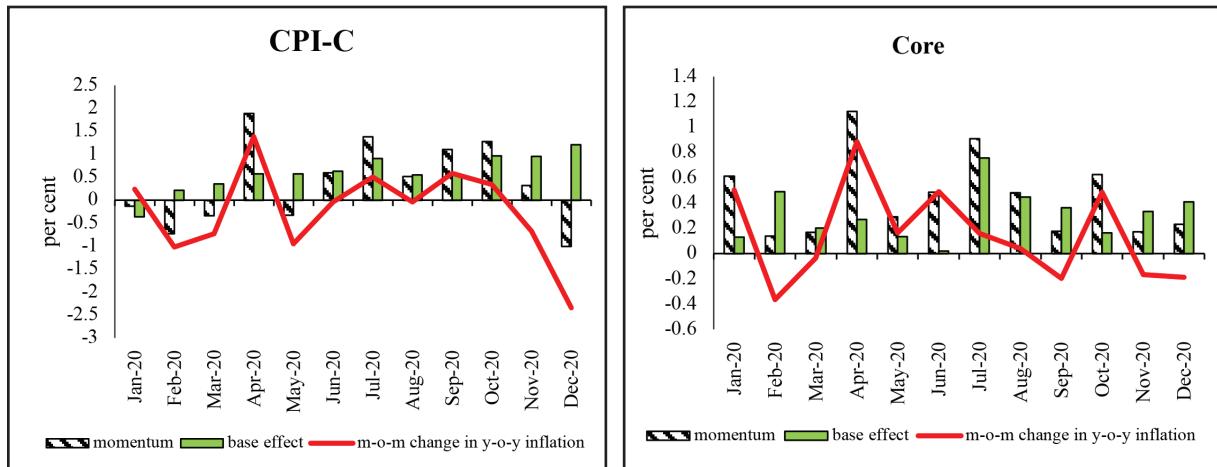
1. **Momentum:** why p_{t-1} moved to p_t (month-on-month change in price index). It captures the recent price changes.
2. **Base effect:** why p_{t-12} moved from p_{t-13} . It captures the price changes a year ago.

5.8 Thus, the difference between the YoY inflation rates in two subsequent months is approximately the same as the difference between the month-on-month rate in the current month and the month-on-month rate twelve months previously (European Central Bank, 2005). A lower base effect or higher momentum has a positive impact on the change in inflation.

$$\pi_t - \pi_{t-1} = [(\ln(p_t) - \ln(p_{t-1})) - (\ln(p_{t-12}) - \ln(p_{t-13}))] * 100$$

Momentum Effect
Base Effect

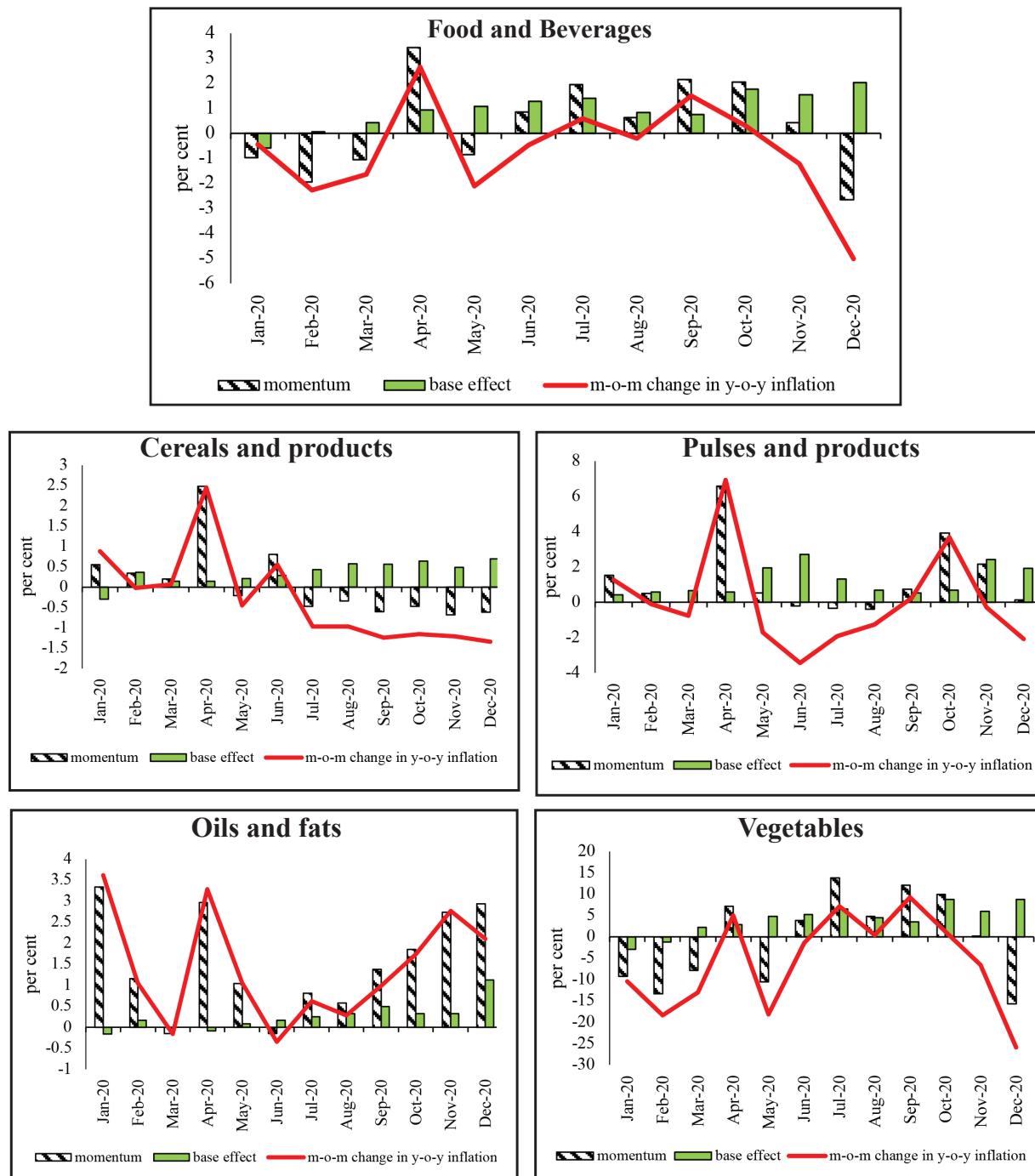
Figure 7: CPI-C and core inflation

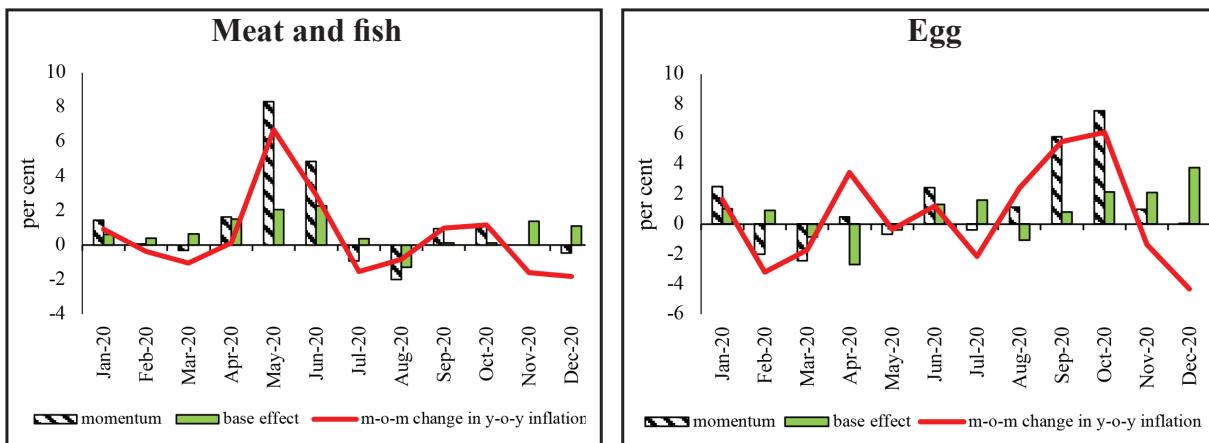


Source: NSO

5.9 CPI headline and CPI core inflation from April 2020 to October 2020 was driven mostly by substantial increase in price momentum i.e., increase in recent price index was pushing up the inflation each month (Figure 7). In both cases, positive base effect helped moderate the inflation. A major jump is witnessed in April 2020, with inflation rate increasing from 5.8 per cent in March 2020 to 7.2 per cent in April 2020 and then declining to 6.3 per cent in May 2020. The jump is mainly witnessed on account of sudden and sharp increase in momentum in the month of April 2020, possibly due to the initial disruptions caused by COVID-19 lockdown. By November 2020, price momentum moderated significantly and coupled with positive base effect helped ease inflation.

Figure 8: CPI food and beverages and its sub-group inflation



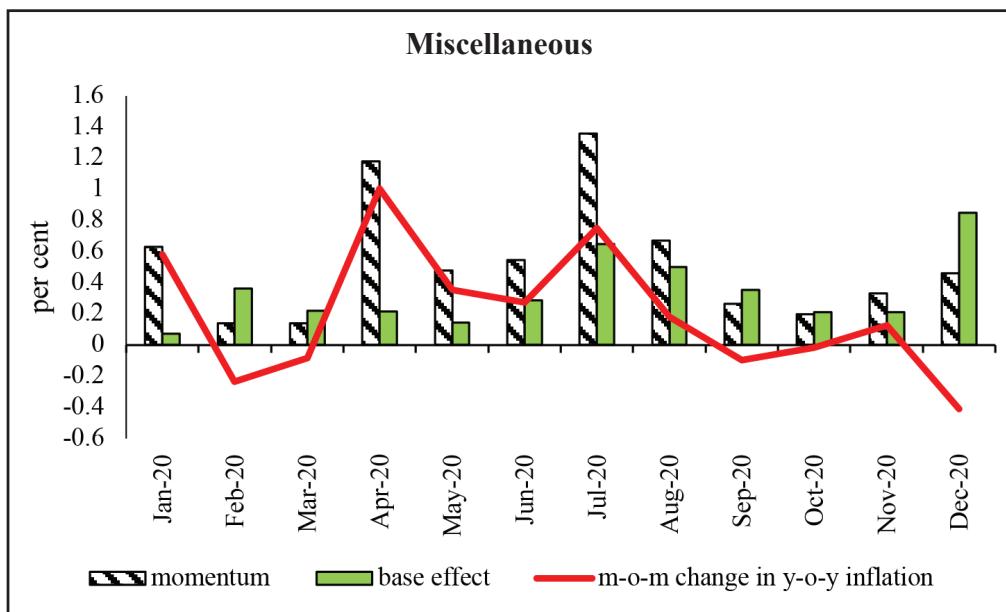


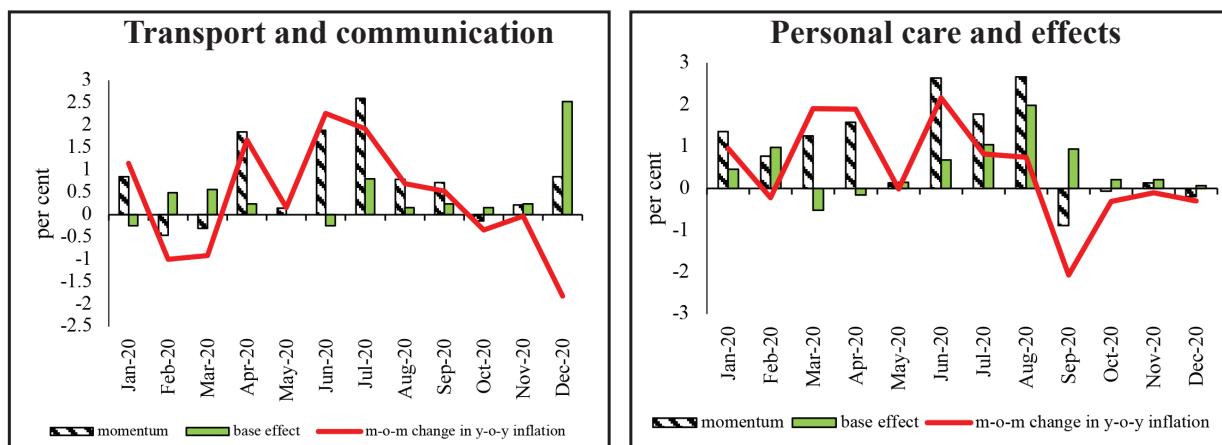
Source: NSO

5.10 In the ‘food and beverages’ group, a similar pattern is observed as in the case of CPI headline and CPI core. In November 2020, decline in price momentum along with high base effect helped ease food inflation (Figure 8). Among the various sub-groups under ‘food and beverages’ group, different patterns emerge. For example, in case of cereals, since July 2020 the decline in monthly YoY inflation is led by both negative price momentum and positive base effect. In case of oils and fats, the high inflation is mostly driven by substantial jump in price momentum; base effect has been moderate in this case. Even in the case of vegetables, inflation is mostly driven by large increase in price momentum since July 2020.

5.11 In ‘transport and communication’ and ‘personal care and effects’, increase in inflation since April 2020 has been a result of sudden jump in price momentum (Figure 9). However, price momentum moderated substantially since August 2020 in ‘transport and communication’ and turned negative in September 2020 for ‘personal care and effects’. Overall, price momentum has dominated the change in inflation during the year. Government has, therefore, rightly intervened in containing inflation, especially in vegetables.

Figure 9: CPI Miscellaneous group and its sub groups inflation



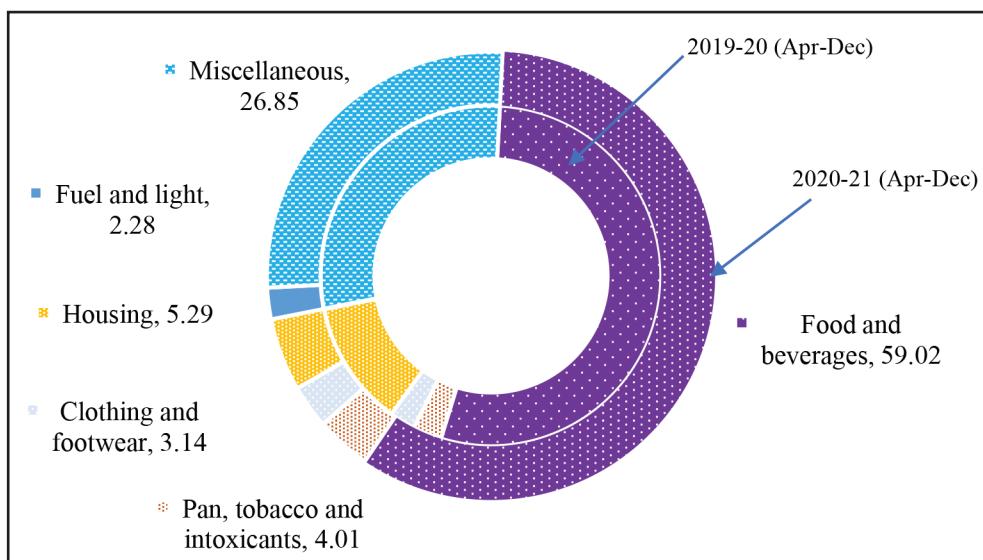


Source: NSO

DRIVERS OF INFLATION: THE PRODIGIOUS IMPACT OF FOOD INFLATION

5.12 During 2019-20 (Apr-Dec) as well as 2020-21 (Apr-Dec), the major driver of CPI-C inflation was the food and beverages group, though its contribution has increased to 59.0 per cent in 2020-21 (Apr-Dec) compared to 53.7 per cent in 2019-20 (Apr-Dec). Miscellaneous group was the second largest contributor to inflation, contributing to 26.8 per cent of overall inflation (Figure 10). Among the sub-groups in miscellaneous group, transport and communication contributed the most followed by personal care and effects.

Figure 10: Contribution of groups to overall CPI-C inflation in 2019-20 (Apr-Dec) and 2020-21 (Apr-Dec) in per cent

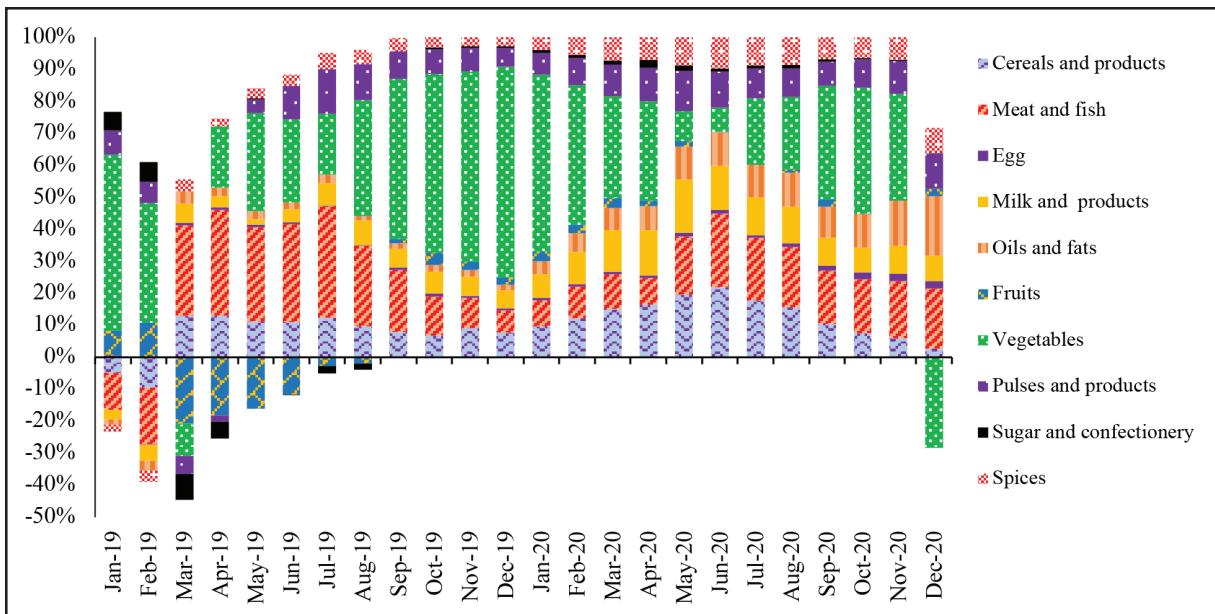


Source: NSO

5.13 Food inflation based on CFPI which remained negative from October 2018 to February 2019, showed a sharp increase since the second half of 2019, mainly due to surge in vegetable prices, before declining in the recent months. High food inflation since March, 2020 is indicative of supply chain bottlenecks owing to COVID-19 induced disruptions. The contribution of food

sub-groups to CFPI shows that ‘vegetables’, ‘meat & fish’, ‘oils & fats’ and ‘pulses & products’ were the major contributors to food inflation in the current year (Figure 11). Contribution of vegetables turned negative in December 2020 owing to sharp fall in vegetable prices. Cereals, which contributed highly to food inflation in June 2020, has declined continuously since then.

Figure 11: Contribution of food sub-groups to CFPI

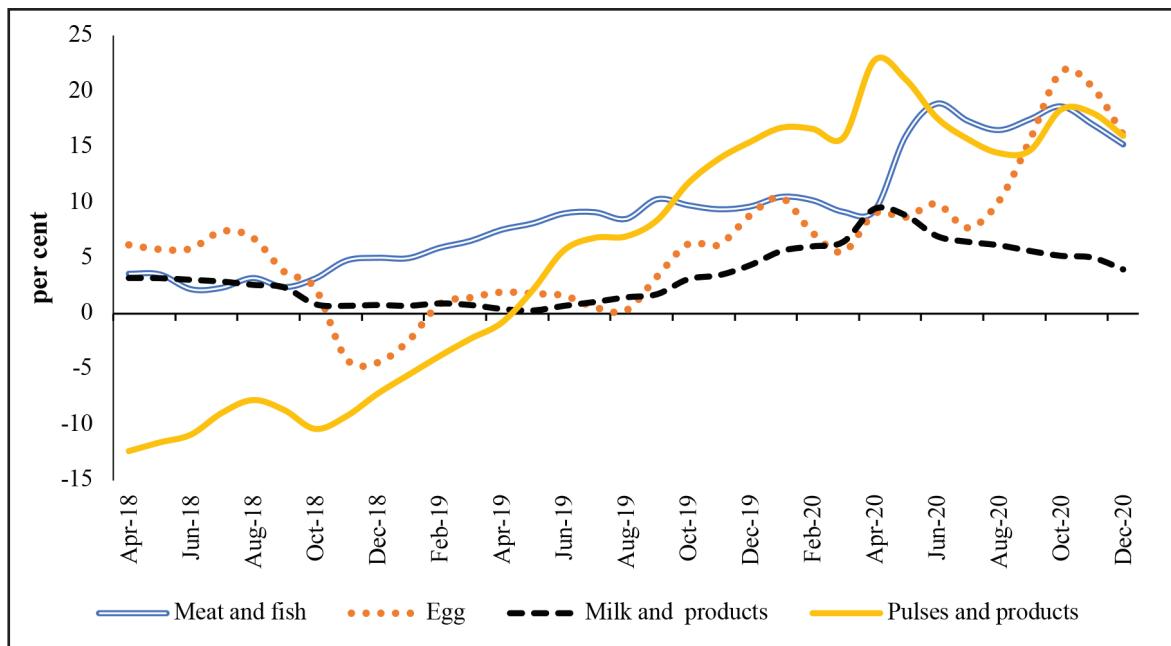


Source: NSO.

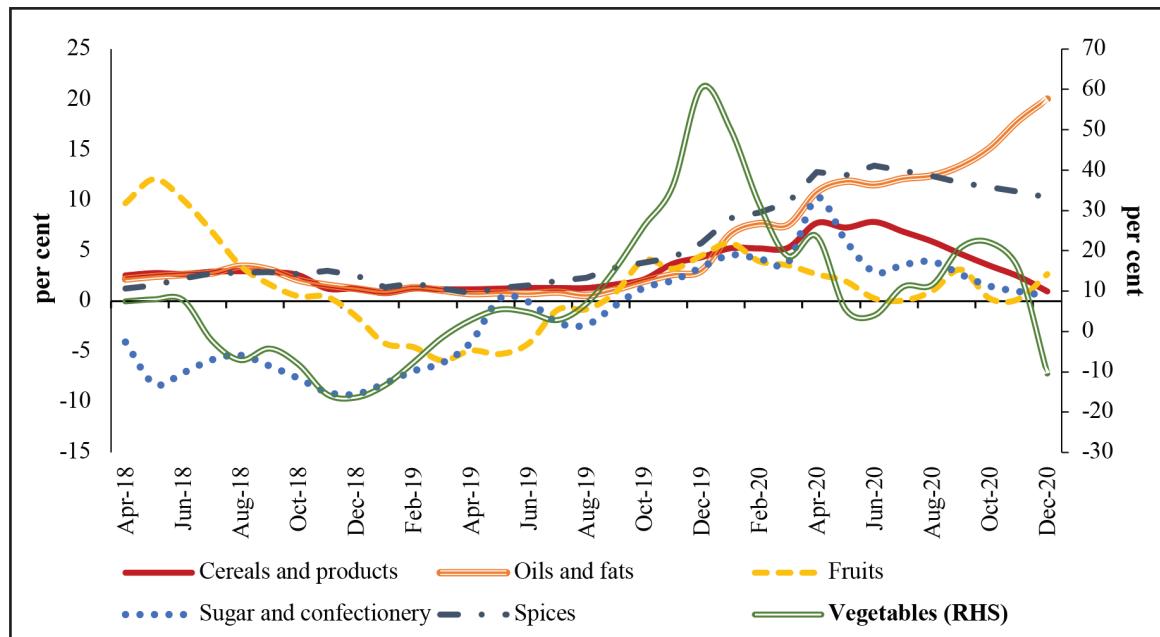
5.14 Inflation in vegetables remained elevated during the period September 2019 to April 2020. It declined to 4 per cent in June 2020 and remained in double digits from July to November 2020. The rise in vegetables inflation was mainly on account of rise in prices of potatoes and onions during the lean season. In the case of onion, arrivals declined by 74 per cent in April 2020 and by 62 per cent in case of potatoes in August 2020. However, immediate steps have been taken by the Government to contain the price rise of these items, resulting in a steep decline in vegetables inflation to (-)10.4 per cent in December 2020.

5.15 Apart from vegetables, inflation in some of the protein rich items like egg, meat & fish and pulses & products remained elevated in the current year, thereby contributing significantly to food inflation. The only exception was inflation in milk & products which declined continuously from 9.4 per cent in April 2020 to 4.0 per cent in December 2020. Inflation in meat & fish has remained in double digits in most part of the current year mainly on account of rise in prices of chicken and mutton. After reaching peak in April 2020, inflation in pulses & products declined, before rising to 18.3 per cent in October 2020 and then declined to 16.0 per cent in December 2020. However, lately, inflation in all these items has declined (Figure 12).

5.16 Further, inflation in oils & fats and spices has shown a rising trend in the current year. However, sizeable drop in inflation since April 2020 has been observed for some of the major food groups like cereals & products which declined from 7.8 per cent in April 2020 to 1.0 per cent in December 2020, and sugar which declined from 10.3 per cent in April 2020 to 0.5 per cent in December 2020 (Figure 13).

Figure 12: CPI inflation in protein rich items

Source: NSO

Figure 13: CPI inflation in other major food groups

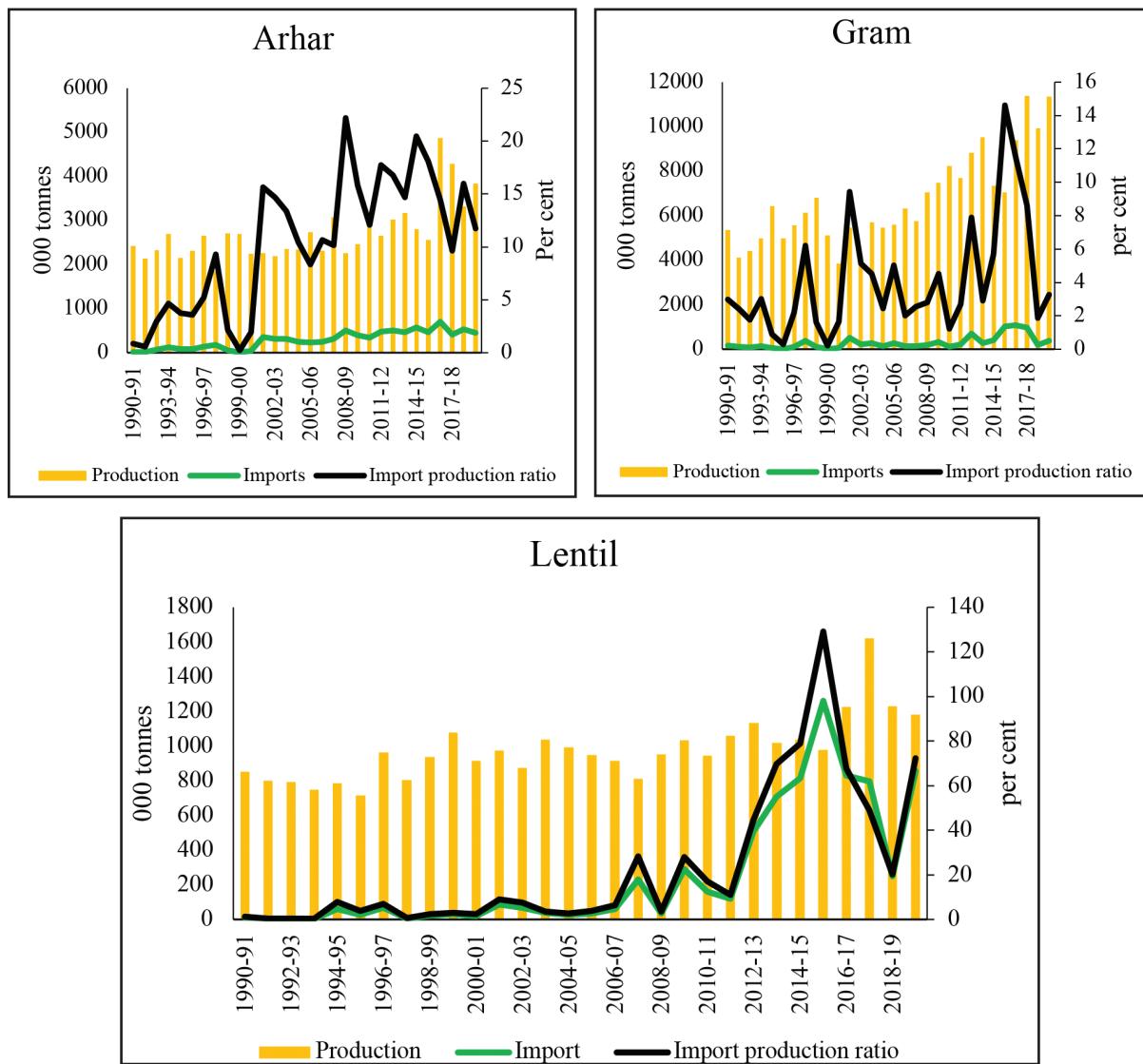
Source: NSO

5.17 Pulses inflation has been above 5 per cent since June 2019 and has been on an upward trend since then. In April 2020, a sudden spike was observed and inflation touched 22.8 per cent likely due to the disruptions caused by COVID-19 related restrictions and stocking of pulses by households during the lockdown. Although production of total pulses has increased in 2019-20 and 2020-21, at item level, production of urad has declined significantly in 2019-20 compared to the previous year. Production of moong was stable in 2019-20. Production of lentils was also lower in 2019-20. Further, the estimated production of pulses in 2019-20 and 2020-21 has been less than the target. At item level, all pulses except split-gram recorded double-digit CPI

inflation in December 2020. However, in December 2020, inflation of all pulses, except peas and ‘other pulses’ declined as compared to the previous month.

5.18 Imports can add to the availability of any commodity and thus moderate prices in case of shortfalls in domestic supply. In the case of pulses, it is seen that import is highly negatively correlated with production (Figure 14). In the year of low production, import increases and in the year of bumper crop, imports fall. Each year, import policy is changed according to the level of production. However, such frequent changes in import policy adds to confusion of market participants owing to uncertainty in policy regime.

Figure 14: Production, import and import production ratio

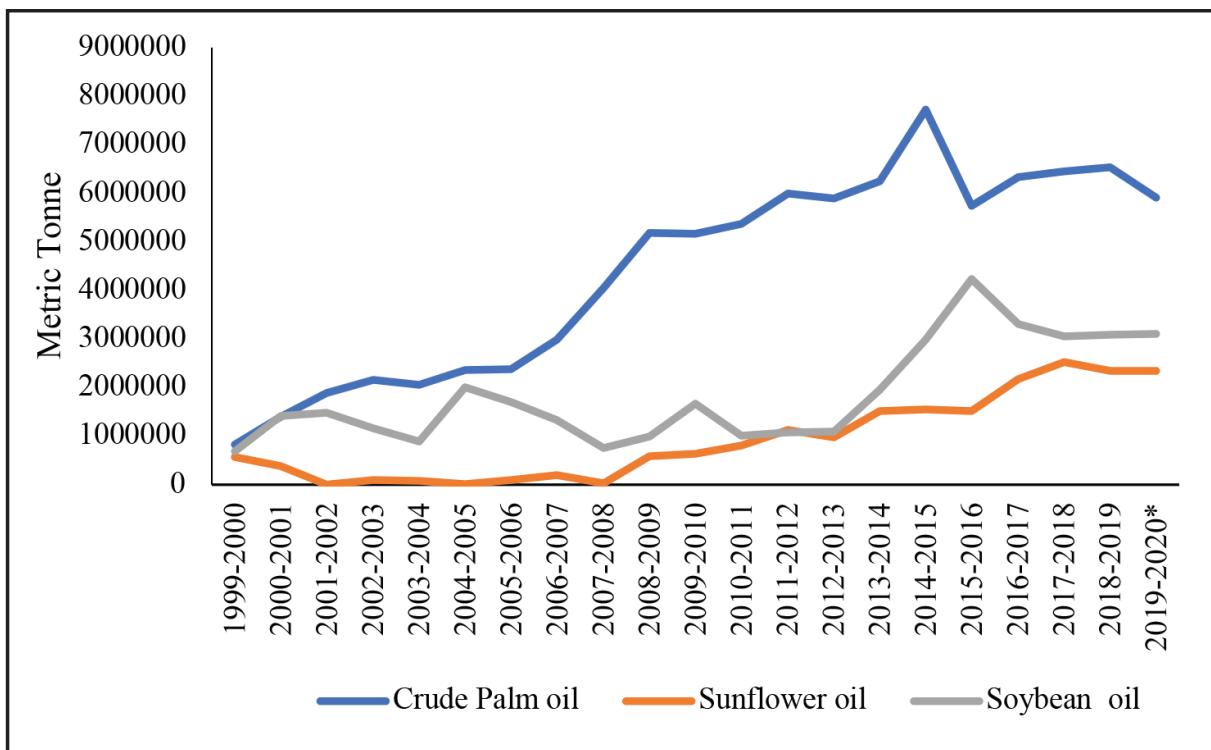


Source: CMIE

5.19 CPI inflation in oils and fats has been increasing since August 2019 and has reached 20 per cent in December 2020. While inflation in mustard oil, groundnut oil and refined oil (sunflower, soyabean etc.) is above 20 per cent, coconut oil is above 10 per cent in December 2020. India is the largest importer of edible oils. Demand for edible oils is rising in India, while

domestic production is almost stagnant, due to which dependence on imports has increased over the years (Figure 15). This is risky as problems in the world market may have serious repercussions on the domestic market. Effective measures to increase domestic production are necessary to reduce import dependency (CACP, 2020). Imports in 2020 were affected as Malaysia and Indonesia imposed export tariffs on crude palm oil. This affected domestic prices of palm oil from Jan-Jun 2020.

Figure 15: Import of edible oils



*Till September

Source: Solvent Extractors Association of India.

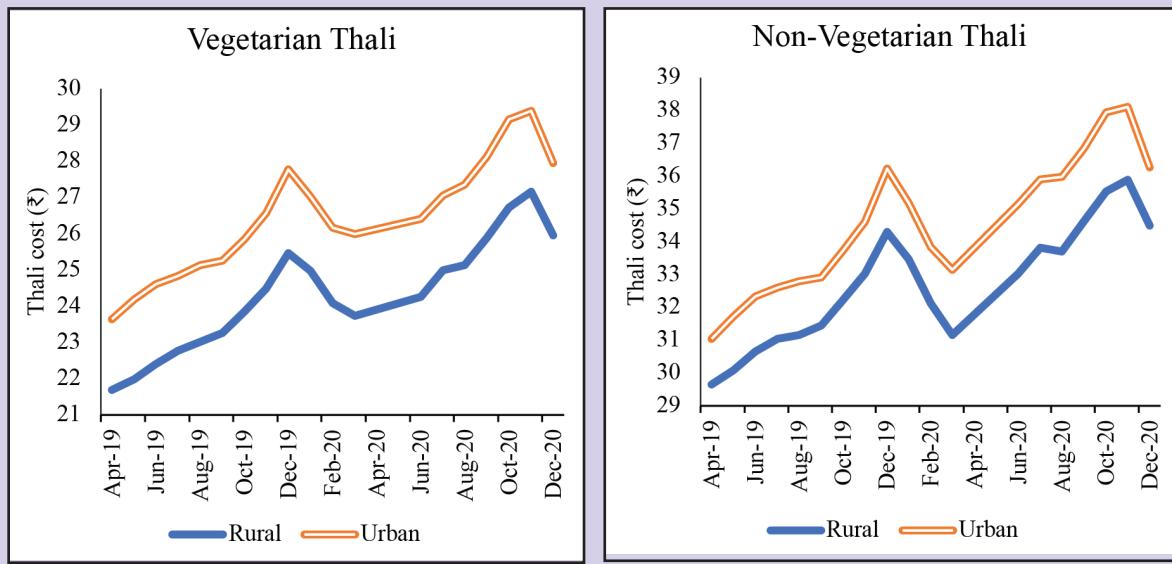
5.20 Escalation in wholesale prices was also witnessed after the COVID-19 induced restrictions possibly because of labour shortages on account of reverse migration, social distancing in factories, and other transaction costs in the production and distribution network. Although production of total oilseeds is estimated to have increased in 2019-20 and 2020-21, production of soyabean has declined significantly in 2019-20. The kharif production of sunflower for 2020-21 is estimated to have declined as compared to the previous year. The production of sunflower has been declining continuously over the years, and only a marginal increase has been observed in 2019-20. Production of mustard also has declined in 2019-20.

5.21 The variations in the prices of essential food commodities are experienced by the common man through its impact on the households' food budget. An attempt was made in this regard to assess the cost of a plate of food in Vol-I, Economic Survey, 2019-20 in the form of *Thalinomics* (Box 2).

Box 2: Thalinomics: Cost of a plate of food in 2020-21

The Economic Survey, 2019-20 Volume-I put forth a novel concept of a thali in the Chapter titled “*Thalinomics*”: *The Economics of a Plate of Food in India*. Using the methodology prescribed in the chapter and using the recommended dietary allowances of cereal, pulses/meat, vegetable, spices, edible oil and fuel based on the dietary guidelines prescribed for an Indian adult male heavy worker (NIN, 2011), the NSO has compiled the Thali index using the data collected by NSO for CPI-C. The State-wise shares within cereals, pulses etc. are decided as per the Consumption Expenditure Survey 68th Round data (2011-12). PDS prices for both rural and urban sectors and prices of items canvassed in respect of affluent markets in urban areas, have been excluded. It may be noted that excluding PDS consumption does have some challenges. Thali cost represents the cost of a meal cooked within household but as it excludes PDS consumption is wholly based on the transactional prices of the said components of thali, it may be true that the actual cost for a real household may differ from that computed here and may be dependent on the efficacy of the PDS system in a State. The following figures shows the trends in thali cost at All-India level for Vegetarian and Non-Vegetarian thalis since April 2019. While Thali cost have increased between June 2020 and November 2020, they witnessed a sharp fall in the month of December reflecting the fall in the prices of many essential food commodities.

All-India Thali Costs



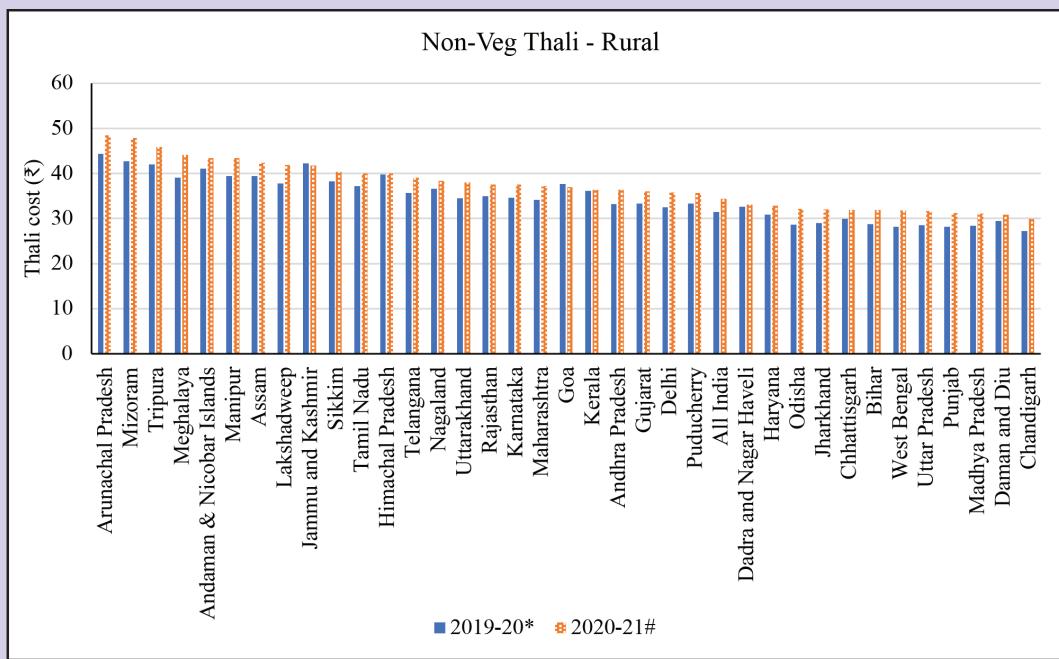
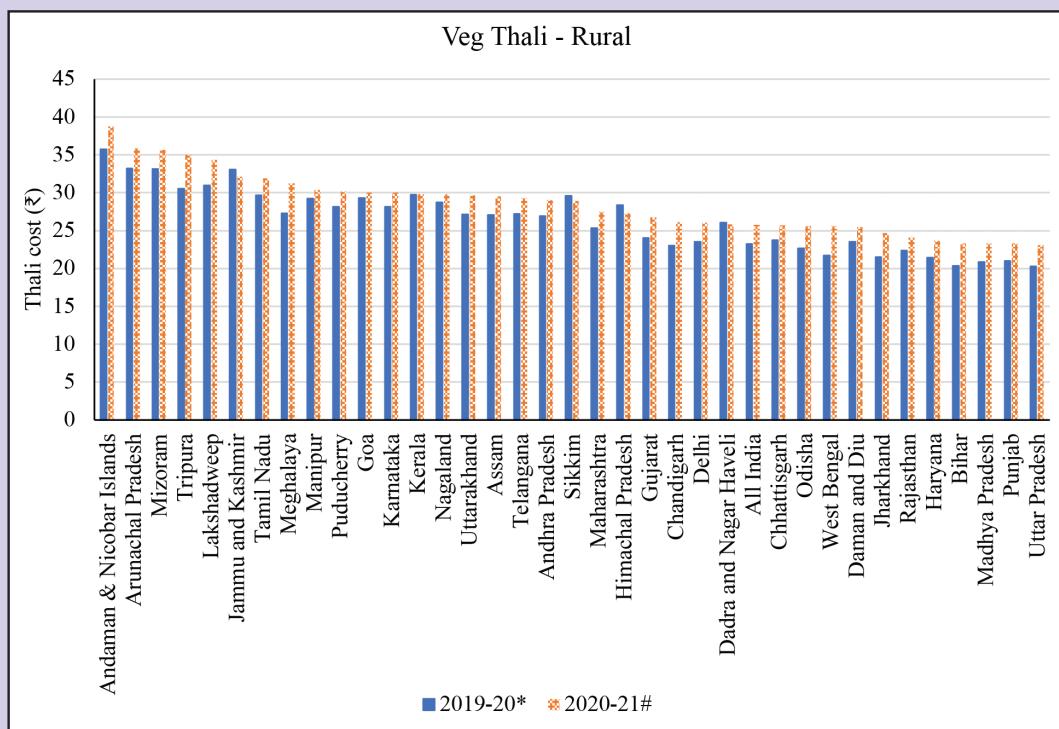
Source: NSO

- Note: 1. Thali cost for the months of April, 2020 & May, 2020 are not compiled as sufficient price data was not available due to lockdown situation of COVID-19 pandemic.
2. Thali cost represents the cost of a meal cooked within household but excludes PDS consumption and may therefore differ from the actual cost for a real household.

Thali costs displayed much variation among the states. In 2020-21(Jun-Dec, 2020), the most expensive Veg thali in the rural areas was in Andaman & Nicobar Islands (₹38.7) while the cheapest in rural areas was in Uttar Pradesh (₹23.1). In terms of Non-Veg thali

during the same period, the most expensive was in Arunachal Pradesh (₹48.5) while cheapest was in Chandigarh (₹29.9) in rural areas. In 2020-21(Jun-Dec, 2020), the most expensive Veg thali in the urban areas was in Andaman & Nicobar Islands (₹40.0) while the cheapest was in Madhya Pradesh (₹24.0). In terms of Non-Veg thali during the same period, the most expensive was in Mizoram (₹52.4) while cheapest was in Haryana (₹28.0) in urban areas.

Thali Costs at the state level





Source: NSO

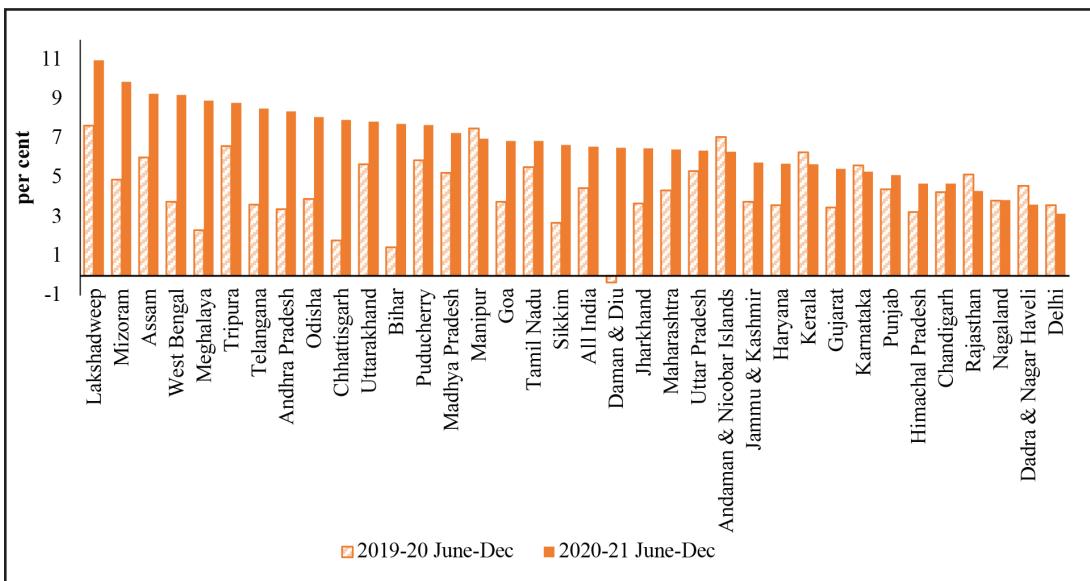
Note: * Apr-Dec, 2019

\$ Data for Urban areas is not compiled by NSO for Arunachal Pradesh

Thali costs for the months of April, 2020 & May, 2020 are not compiled as sufficient price data was not available due to lockdown situation of COVID-19 pandemic and therefore 2020-21 corresponds to Jun-Dec, 2020.

INFLATION IN STATES

5.22 CPI-C inflation increased in most of the states in the current year. However, regional variation persists. Inflation ranged between 3.2 per cent to 11 per cent across States/UTs in 2020-21 (Jun-Dec) compared to (-) 0.3 per cent to 7.6 per cent in the same period last year. In 17 States/UTs, overall inflation is below the all-India average in the current year with Delhi having the lowest inflation, followed by Dadra & Nagar Haveli (Figure 16).

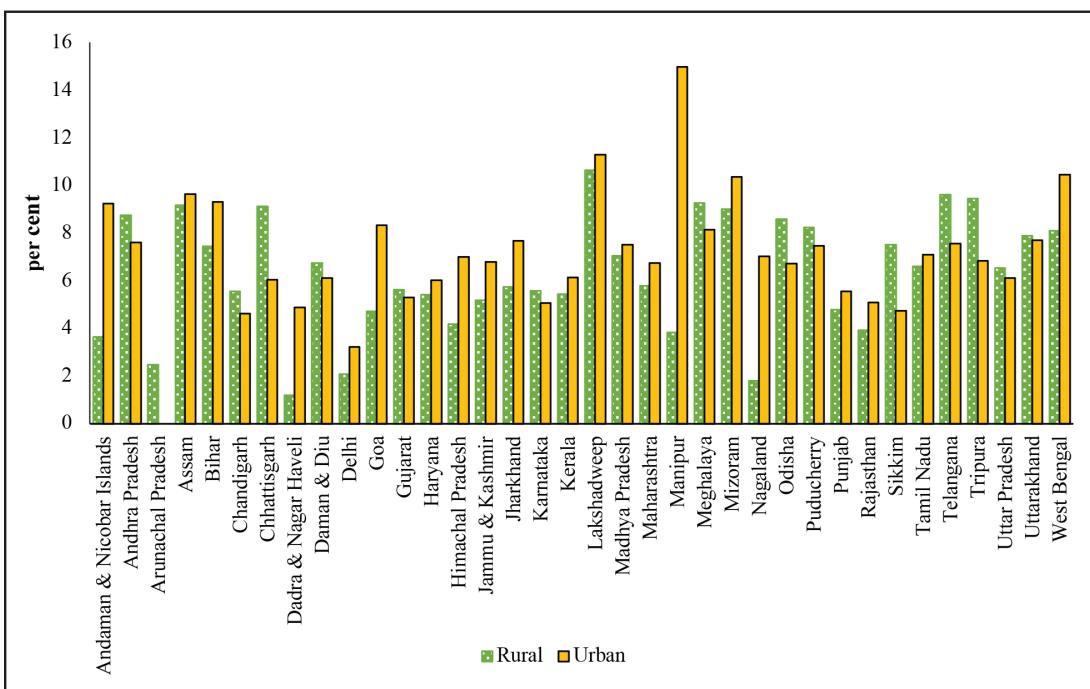
Figure 16: CPI- Combined inflation for States/UTs (in per cent)

Source: NSO

Notes: 1. State level CPI inflation is not available for April and May 2020.

2. Arunachal Pradesh is not considered as CPI-C is not published on a regular basis for this state.

5.23 Majority of the States/UTs has witnessed higher urban inflation than rural inflation in the current year with variations (Figure 17a), mainly due to high food inflation in urban areas.

Figure 17a: Rural and Urban CPI inflation for States/UTs in 2020-21 (Jun-Dec)

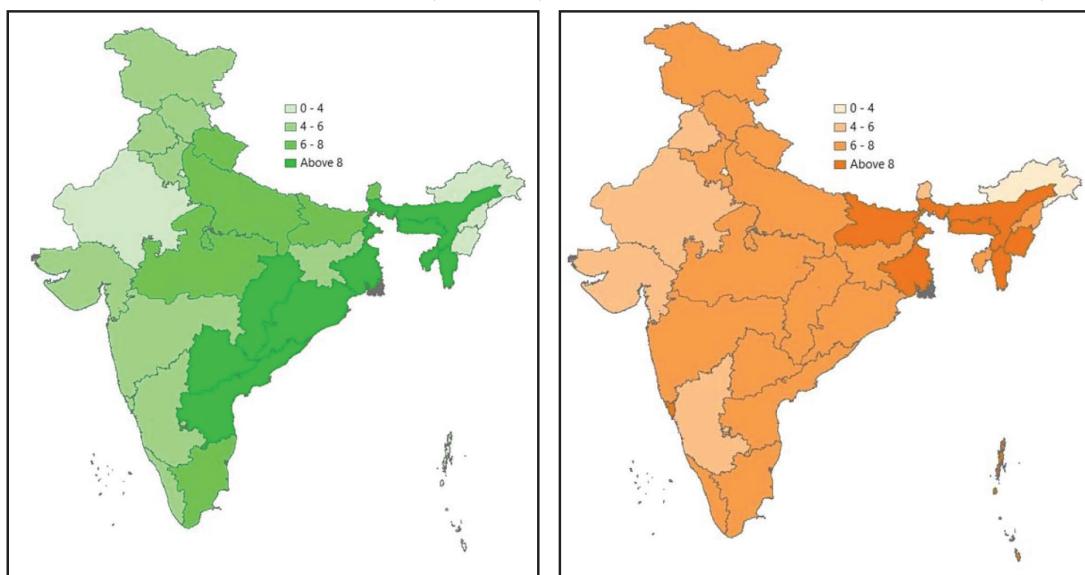
Source: NSO

Notes: 1. State level CPI indices are not available for April and May 2020.

2. CPI Urban inflation is not available for Arunachal Pradesh as it is not published on a regular basis for this state

5.24 States in the North Eastern region as well as those in the East, experienced relatively higher inflation in rural areas. These states also experienced high urban inflation (Figure 17b & c).

17b. CPI- Rural Inflation in 2020-21 (Jun-Dec) 17c. CPI- Urban Inflation in 2020-21 (Jun-Dec)

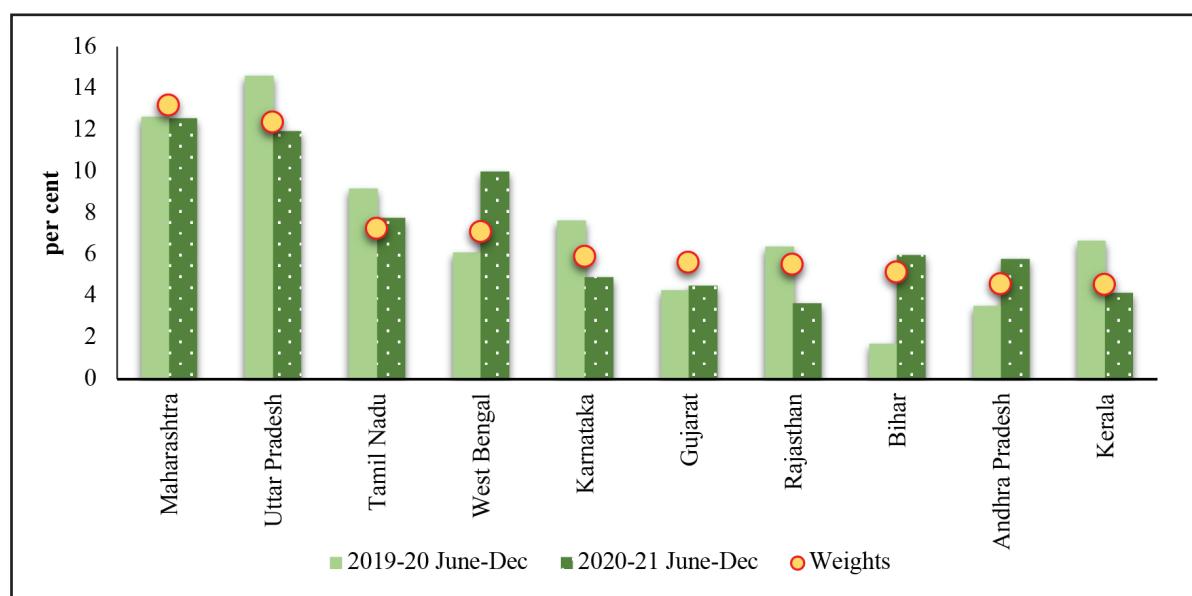


Source: NSO

Notes: CPI Urban inflation is not available for Arunachal Pradesh as it is not published on a regular basis for this state.

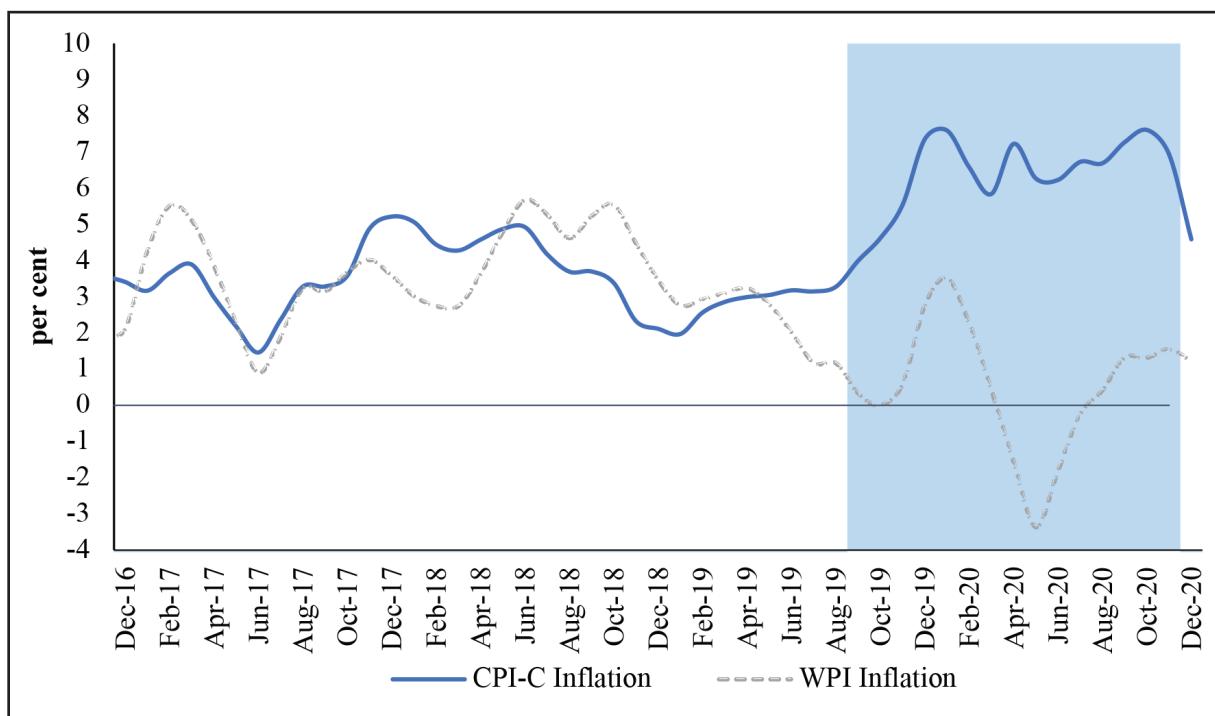
5.25 Top ten States (as per weights) having 71.2 per cent weight in CPI-C contributed 71.2 per cent to overall CPI inflation in the current year (Jun-Dec), as compared to 72.7 per cent during the same period last year (Figure 18).

Figure 18: Contribution of Top 10 States (as per weights) to Overall CPI inflation



Source: NSO

Note: State level CPI indices are not available for April and May 2020. Value of the weight is the height at which the bubble stands. For eg, for Maharashtra, it is 13.2% and for Kerala, it is 4.6%.

Figure 19: CPI-C and WPI Inflation

Source: NSO and OEA, DPIIT

Note: The shaded region in the graph represents the period where Consumer Food Price Inflation has been higher than Non-Food inflation

WHICH MEASURE OF INFLATION REFLECTED ECONOMIC ACTIVITY BETTER IN 2020-21?

5.26 The previous two sections indicate the role of supply-side constraints, especially in the case of perishable vegetables contributing to inflation. Since February 2017, CPI-C inflation and WPI inflation have been moving more or less in tandem till beginning of 2019-20. After this period, gap has emerged, which has widened in the recent months (Figure 19). Between April-July 2020, WPI inflation has been in the negative region while CPI-C inflation has been above 6 per cent. The major feature in this widening gap is that this has happened in a period witnessing high food inflation. The shaded region in Figure 19 shows the period during which CFPI inflation has remained higher than non-food inflation. The movement in CPI-C inflation is quite contrary to the weak demand conditions prevalent in the economy in the recent months owing to the COVID-19 crisis. Food items have a large weight of around 39 per cent in the CPI-C index. This means that shocks to food prices can have large impacts on CPI-C inflation.

5.27 For the period April 2020 to November 2020, CPI-C is weakly related to IIP growth while WPI inflation and CPI-C Core inflation are positively and strongly related to IIP growth. Therefore, core CPI-C inflation and WPI Inflation, have been more in sync with the demand conditions in the economy. During the period April 2020 to November 2020, the correlation coefficient between WPI inflation and YoY growth in IIP is around 0.8 while the correlation coefficient between CPI-C core inflation and IIP growth has been 0.9. The correlation between

IIP growth and CPI inflation during the same period is 0.2. Similarly, we can see high correlation of CPI Core inflation and WPI inflation with other metrics of production and demand in the Indian economy (Table 5).

Table 5: Correlation of production/demand metrics with CPI-C, Core and WPI Inflation in 2020-21[#]

	CPI-C Inflation	CPI-C Non-food non-fuel (core)	WPI Inflation
Growth in tractor production*	-0.34	0.87	0.68
Growth in vehicle registration*	-0.27	0.78	0.89
Overall Growth of Eight Core Industries	0.20	0.90	0.75
Growth of Coal	0.65	0.62	0.86
Growth of Crude Oil	0.11	0.57	0.56
Growth of Natural Gas	0.19	0.97	0.77
Growth of Petroleum Refinery Products	-0.06	0.61	0.51
Growth of Fertilizers	-0.43	0.42	-0.10
Growth of Steel	0.14	0.89	0.71
Growth of Cement	-0.08	0.79	0.45
Growth of Electricity	0.48	0.91	0.85
IIP growth	0.23	0.92	0.77

Note: # April-November, 2020

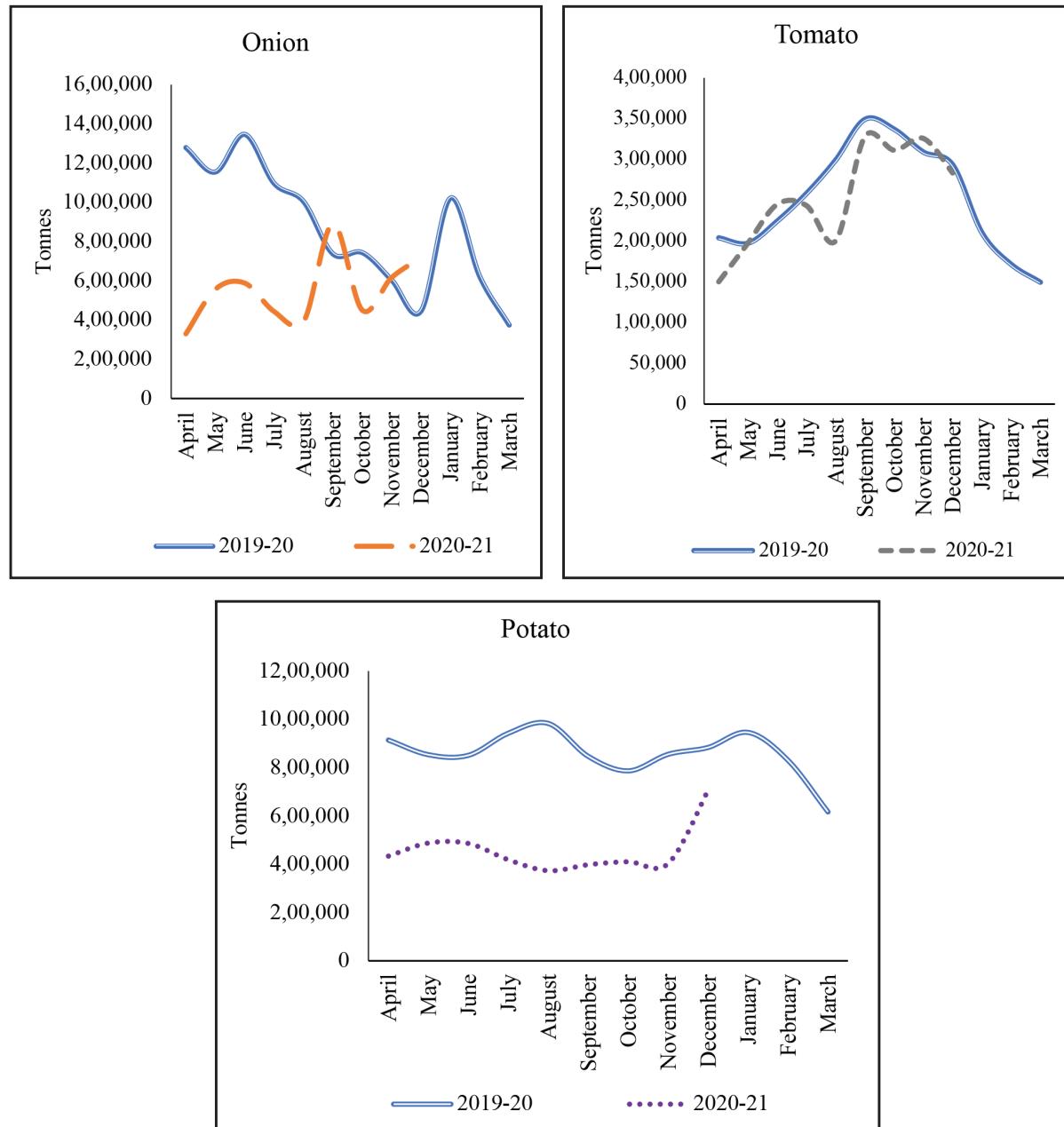
* April-December, 2020

Source: Tractor and Mechanization Association, VAHAN Dashboard, Office of Economic Adviser, DPIIT and NSO

5.28 A tight monetary policy may have a role in managing inflation in case of excess demand driving high inflation. However, the current scenario presents a different picture. The current spike in CPI inflation driven by spike in food prices is mainly a supply-side phenomenon. This can be easily assessed from the fact that arrivals in the market, for agricultural commodities like onion, tomato and potato that have witnessed spikes in recent times, have been much lower compared to the previous years (Figure 20). Further, the weights of all items in CPI-C are based on NSO Household Consumption Expenditure Survey 2011-12. Weight of food items in the index might have significantly decreased over the decade since 2011-12. There is a need to capture the revised weight of food items in the index to correctly depict the true

picture of inflation in the country. Further, in the context of increasing retail e-commerce transactions, it is important to include such new sources of price data for the construction price indices.

Figure 20: Market arrivals of Onion, Tomato and Potato



Source: CMIE

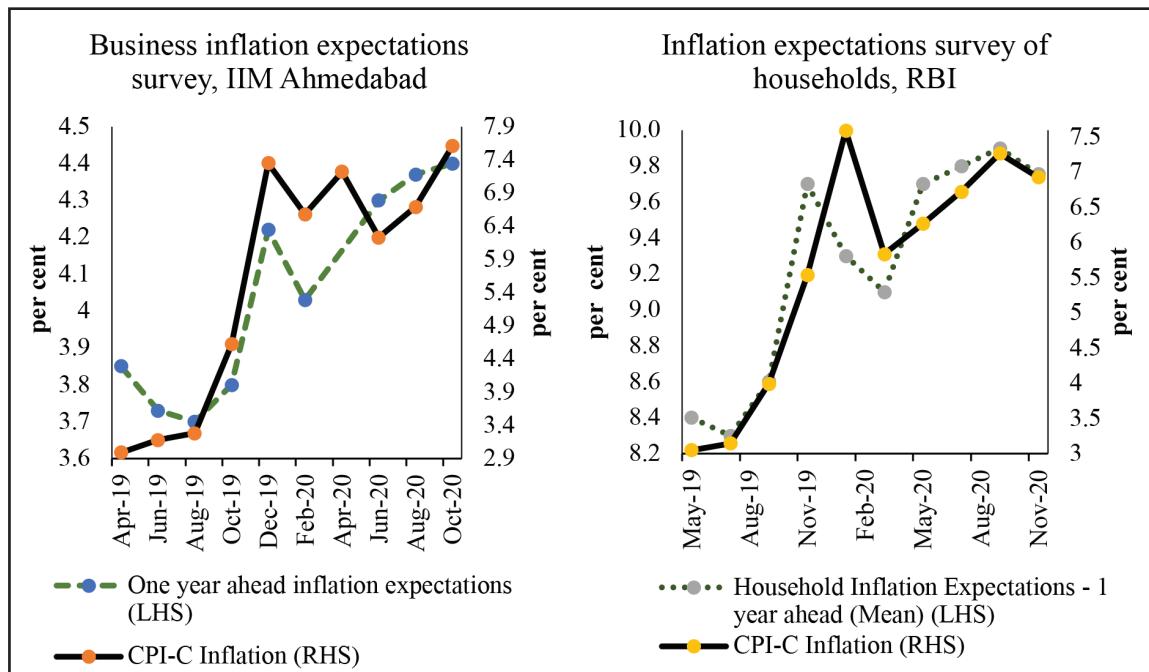
Box 3: Headline inflation or core inflation as target for monetary policy

Core inflation (inflation in the price index excluding food, fuel and other volatile components) has been viewed by many as the better measure of inflation for monetary policy purposes. *This is because food and fuel price shocks are transitory as well as*

mainly supply driven and therefore not a monetary phenomenon. Theoretical work in the area has used models with price and/or wage stickiness to show that targeting core inflation maximizes welfare. When prices are sticky, mark-ups fluctuate and therefore also distort relative prices. In these models, the flexible price equilibrium is restored by central banks trying to minimize these fluctuations by targeting sticky prices. Much of the literature assumes that markets are complete, allowing households to fully insure against idiosyncratic risks. However, in the case of developing economies there are two deviations from these assumptions: 1) inability of agents to smooth their lifetime consumption, and 2) other structural differences such as a high share of food in household consumption expenditure (Anand et al., 2015). Anand et al. (2015) contend that while under complete markets, the choice of targeting strict core inflation is the best policy, with incomplete markets, headline inflation targeting is welfare improving relative to core inflation targeting. However, using a setup similar to Anand et al. (2015), Portillo et al. (2016) find that core (non-food) inflation stabilisation is very close to optimal even in the case of an economy with credit constrained consumers. Portillo et al. (2016) find that an optimal measure of inflation targeting should provide very low weight to food inflation. This weighting is much lower than the weightage of food in Headline CPI. A recent RBI working paper (Nadhanael, 2020), analyses weekly price data on 45 food items in India, for the period 2005-18, from the data collected by the Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare. The paper finds heterogeneity in the extent of price stickiness among food products. The prices of food items change, on average, in 1.29 months. Vegetable prices change at higher frequency than others (almost twice a month on average), price of pulses changes thrice almost every 2 months, the price of milk changes once in five months, and prices of eggs, meat and fish change on average once a month, prices of cereals change once almost every three and a half months. Given this finding of wide variations in the price stickiness of food items, the paper suggests that it is important to pay attention to the sticky component of food inflation in addition to core inflation.

INFLATION EXPECTATIONS

5.29 The one year ahead inflation expectation for CPI-C inflation has risen during the current year. As per the business inflation expectations survey of Indian Institute of Management (IIM) Ahmedabad, one year ahead inflation expectations for CPI-C inflation slightly rose from 4.0 per cent in February 2020 to 4.4 per cent in October 2020. Inflation expectations survey of households conducted by RBI also pointed to a slight rise in inflation expectations from 9.1 per cent in March 2020 to 9.7 per cent in November 2020, though it was lower compared to September 2020. The movement in the inflation expectations have been roughly in the direction of movement of the current inflation rate as measured by CPI-C (Figure 21). This has an important implication with respect to the CPI-C being an important metric for monetary policy. Owing to being a metric of price change that households can relate to it targeting headline inflation can anchor inflation expectations.

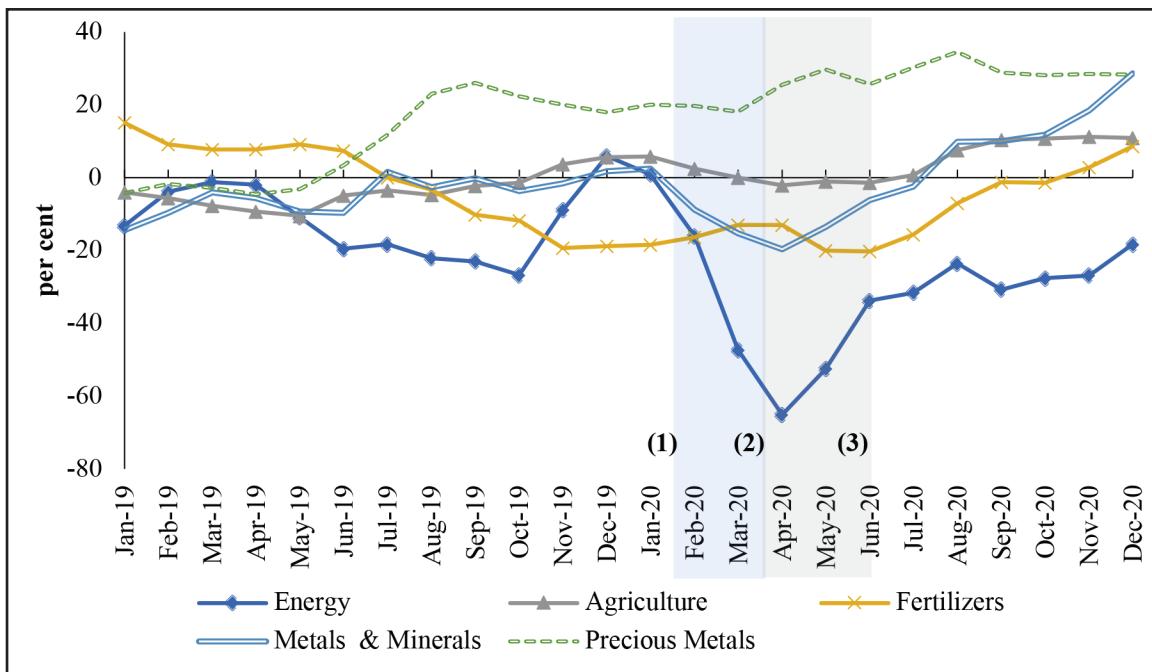
Figure 21: One year ahead inflation expectations and current inflation

Source: IIM Ahmedabad; RBI, NSO

GLOBAL COMMODITY PRICES

5.30 The YoY growth in global commodity prices, except prices of precious metals and fertilizers, saw a decline from their levels in December 2019, between January and April 2020 owing to COVID-19 induced restrictions around the world and consequent fall in demand for these commodities after remaining subdued during 2019. The largest impact of COVID-19 has been on energy prices driven by fall in crude oil prices. Energy prices have seen some rebound since the pandemic owing to production cuts by OPEC+ countries (World Bank, 2020b), though they continue to be below levels of the previous year. Agricultural prices remained more or less stable during the period of pandemic induced restrictions. This may be attributed to the lower income elasticity of demand for these commodities compared to other commodities (World Bank, 2020a). Growth in prices of agricultural commodities, metals and minerals and fertilizers have now returned to the positive territory (Figure 22). Edible oil prices have been a major driving force in putting upward pressures on agriculture prices. Metal prices have risen owing to higher industrial demand from China (World Bank, 2020b). The average growth in energy index stood at (-) 35.1 per cent in 2020-21 (Apr-Dec) compared to (-) 14.7 per cent in 2019-20 (Apr-Dec). On the other hand, average growth in agriculture index was 5.2 per cent in 2020-21 (Apr-Dec) compared to (-) 3.2 per cent in 2019-20 (Apr-Dec). Precious metals saw a 28.9 per cent growth in 2020-21 (Apr-Dec) compared to 12.5 per cent in 2019-20 (Apr-Dec).

5.31 Gold prices saw sharp spike in prices during 2020. Gold prices rose as investors turned to gold as a safe haven investment amid COVID-19 induced economic uncertainties (Figure 23). Global Economic Policy Uncertainty (GEPU) Index is constructed using information from newspaper articles and proxies policy related economic uncertainty (Baker et al., 2016). From January 2020 onwards, gold prices have sharply increased with the sharp rise in the GEPU. In fact, compared to other assets, gold had returns during the year that were considerably higher (Figure 24).

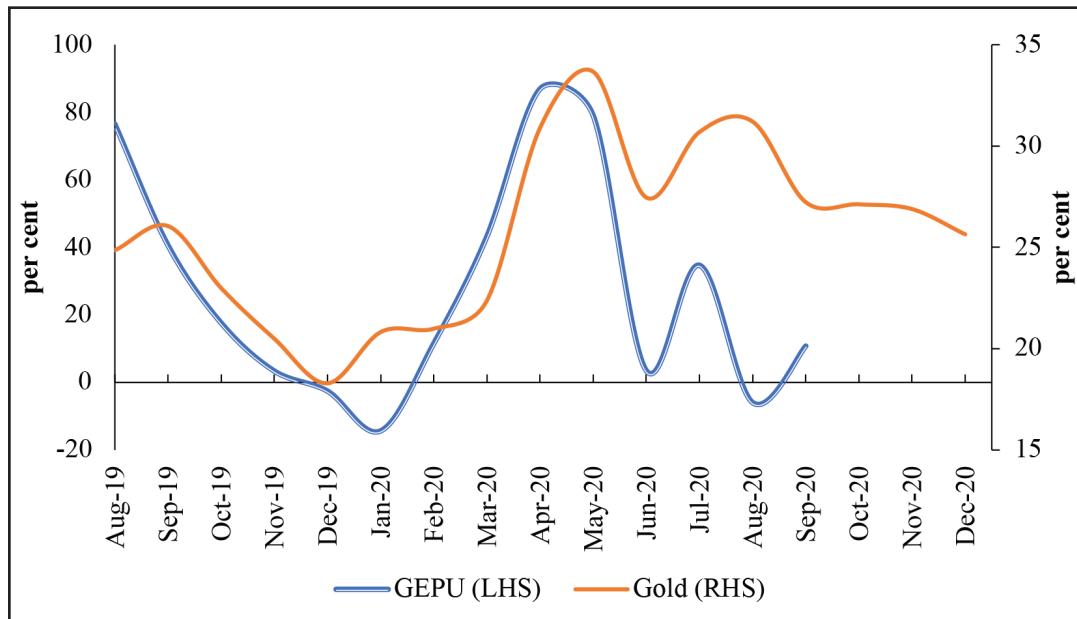
Figure 22: Trends in international commodity prices (YoY growth)

Note: 1. First human to human transmission of COVID-19 confirmed in January, 2020

2. Restrictions on economic activity imposed in major economies in March, 2020

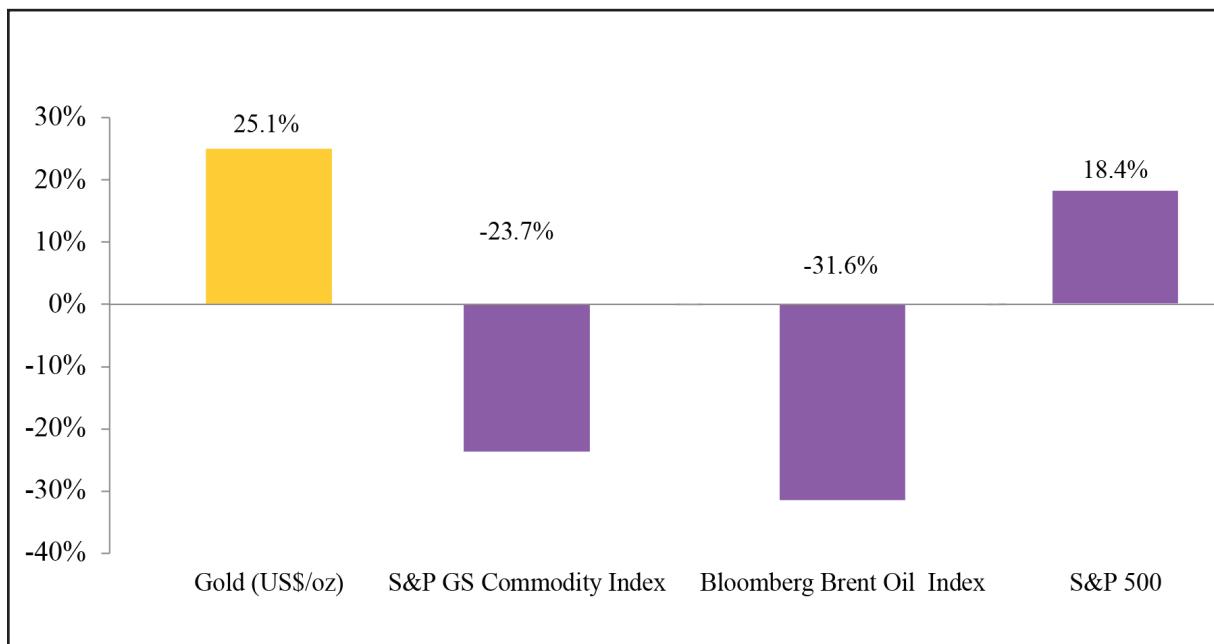
3. Restrictions start being lifted in major economies.

Source: World Bank; WHO; <https://www.reuters.com/article/us-health-coronavirus-timeline-idUSKBN23Z0UW>

Figure 23: Global Economic Policy Uncertainty (GEPU) and Gold Prices, YoY change

Source: Baker, Scott R., Bloom, Nick and Davis, Stephen J., Global Economic Policy Uncertainty Index: Current Price Adjusted GDP [GEPUCURRENT], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/GEPUCURRENT>. Gold prices from World Bank

Note: The Global Economic Policy Uncertainty Index is a GDP-weighted average of national EPU indices for 20 countries: Australia, Brazil, Canada, Chile, China, France, Germany, Greece, India, Ireland, Italy, Japan, Mexico, the Netherlands, Russia, South Korea, Spain, Sweden, the United Kingdom, and the United States.

Figure 24: Year to Date Returns on Gold and other assets

Source: World Gold Council

Note: Data as on 31 December, 2020

REGULATION OF DRUG PRICES

5.32 Drug prices in India are regulated to ensure continued availability and affordability of essential lifesaving drugs with improved access to consumers. National Pharmaceutical Pricing Authority (NPPA), which is an independent regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices, has played an active role in addressing the exigencies arising out of COVID-19 pandemic and undertook necessary measures to ensure continued availability of life saving essential medicines throughout the country. It invoked extraordinary powers in public interest to ensure that policy enhances access to life saving drugs like Heparin and Medical Oxygen. NPPA has revised upward the ceiling price of Heparin, a Scheduled Drug, included in the COVID-19 Treatment Protocol for a period of six months to ensure its continued availability during the pandemic. NPPA also invoked extraordinary powers in public interest under Drug Price control Order, 2013 and National Disaster Management Act to cap the price of Liquid Medical Oxygen (LMO) and the Oxygen Inhalation (Medicinal gas) for six months. Timely intervention by NPPA eased the situation of Medical Oxygen availability throughout the country, especially in distant and far-flung areas. In order to ensure availability of N95 mask at affordable prices in the country, NPPA, directed Manufacturers/ Importers/Suppliers of N95 mask to maintain parity in prices for non-government procurements and to make available the same at reasonable prices. After issuing such an advisory, major manufacturers/importers of N95 masks have reduced their prices significantly up to 67 per cent. NPPA fine-tuned its interventions during the COVID-19 pandemic to strike at profiteering tendencies by manufacturers/marketers in public interest. At the same time it also ensured enabling ecosystem for the industry to augment production of quality benchmarked medical devices for domestic use and exports.

5.33 During the pandemic period, the government constituted an Inter-Ministerial Empowered Committee to make recommendation for the export of drugs/items requested by foreign governments especially drugs like Hydroxychloroquine (HCQ) and Paracetamol. NPPA coordinated with drug manufacturers of these medicines and created a master database and reporting framework for production and supply of these medicines. Based on the recommendations of Empowered Committee, Department of Pharmaceuticals/NPPA issued recommendation/orders which enabled the MEA/DGFT to fulfill various export commitments towards 114 countries in respect of HCQ and 24 countries in respect of Paracetamol, including SAARC Nations. On the intervention of Empowered Committee, during March-May 2020, the number of manufacturing units of Hydroxychloroquine increased from 2 to 12 and the country's production capacity of Hydroxychloroquine has increased three times i.e., from approximately 10 crore tablets per month to approximately 30 crore tablets per month. Currently, India is having surplus of Hydroxychloroquine tablets over and above its domestic requirements.

NHB RESIDEX

5.34 The Housing Price Indices (HPIs) are a broad measure of movement of residential property prices observed within a geographic boundary. The National Housing Bank (NHB) RESIDEX captures two housing price indices viz. HPI@ Assessment Prices and HPI@ Market Prices - Under Construction Properties based on the data available for 50 cities with quarterly updation. The Composite HPI@Assessment Prices which stood at 83 in June 2013 has moved up to 112 in the quarter ending September 2020. The index has moved up with a compound annual growth rate of 4.2 per cent over the years. The Composite HPI@ Market Prices for Under Construction Properties which stood at 85 in June 2013 has steadily moved up to 104 in the quarter ending September 2020. The index has moved up with a CAGR of 2.8 per cent over the years. The total number of transactions for HPI@Assessment Price reduced by 71 per cent from March 20 to June 20 on Q-o-Q basis while on YoY basis transactions reduced by 67 per cent from June 19 to June 20, indicating that COVID-19 crisis has significantly impacted the residential real estate market. New listings were down significantly and buyers also reduced their home buying activity. During the quarter July 2020 to September 2020, transactions for HPI@Assessment Prices have increased by around 150 per cent on Q-o-Q basis, thus, it is observed that sales have retrieved in affordable segments, reflecting economic recovery in the real estate sector.

MEASURES TO CONTROL INFLATION

5.35 The Government reviews the price situation regularly and has taken number of measures from time to time to stabilize prices of food items. In the wake of rising prices of pulses, onion and potato, the Government has taken several steps to improve the availability of these commodities and make them available to consumers at affordable prices. These include: i. Banning the export of onion w.e.f. 14.09.2020, revoked w.e.f. 1.01.2021. ii. Imposition of stock limit on onion under the EC Act w.e.f. 23.10.2020 to prevent hoarding, lapsed 31.12.2020. iii. Easing of restrictions on imports, facilitating imports at integrated check-posts, issuance of licenses for imports and reduction in import duties. These measures have resulted in increased imports of onion, tur dal and masur dal in the country and resultant cooling of prices.

Other measures to control undue price rise include:

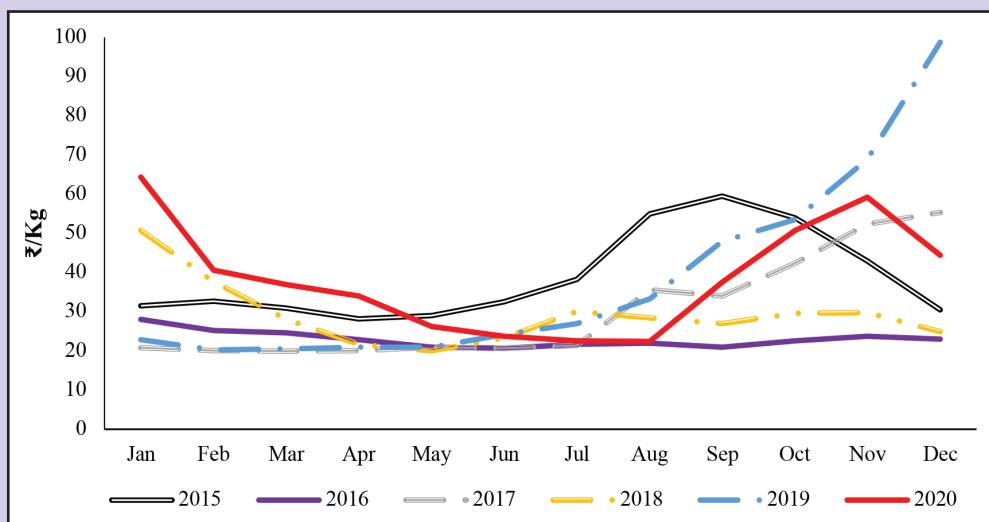
1. Price Stabilization Fund (PSF) Scheme is being efficiently implemented and has succeeded in achieving its objective of stabilizing prices of pulses and offered significant benefits to all stakeholders. Government in 2016 has approved creation of a dynamic buffer of up to 20 lakh tonnes of pulses for appropriate market intervention. A buffer stock of 20.5 lakh tonnes of pulses was built through both domestic procurement of 16.7 lakh tonnes by Food Corporation of India (FCI), National Agricultural Cooperative Marketing Federation of India (NAFED) and Small Farmers' Agribusiness Consortium (SFAC) during November 2015 to July 2017, and imports of 3.8 lakh tonnes by Metals and Minerals Trading Corporation (MMTC) and State Trading Corporation of India (STC). Domestic procurement for the buffer was done from farmers and farmers' association during Kharif Marketing Seasons (KMS) of 2015-16 and 2016-17 as well as Rabi Marketing Seasons (RMS) of 2016-17 and 2017-18, benefitting about 8.5 lakh farmers. Last import was contracted in November 2016, i.e., up to period when domestic availability was low during 2015-16 and 2016-17.
2. Government has taken a decision that all Ministries/Department having schemes with nutrition component or providing food/ catering/hospitality services would utilize pulses from the central buffer. Pulses from the buffer are utilised for PDS distribution, in Mid-day Meal Scheme and in ICDS Scheme. In addition, pulses from the buffer are being utilized to meet the requirement of Army and Central Para-Military Forces. The balance stock is disposed in market, based on considerations like shelf life, efficient buffer management, market prices etc.
3. Creation of buffer stock of pulses has helped in moderating pulses prices. Lower prices of pulses lead to consumer savings. Built buffer also led to remunerative prices to farmers as procurement for buffer was undertaken at MSP or higher rates from them. This incentivized production which led to two successive years of bumper production taking country towards self-sufficiency and resulting in reduced imports and concomitant savings in forex.
4. Subsequently, Government has decided that procurement at MSP would be under Price Support Scheme of Department of Agriculture, Cooperation and Farmers Welfare and requirement towards building suitable buffer would be met from the PSS stock in case procurement is not required to be undertaken under PSF. As the procurement since Rabi-17 was under MSP operation of PSS, pulses procured under Price Support Scheme (PSS) of Department of Agriculture and Cooperation and Farmers Welfare (DACPW) have since been channelized to PSF to the extent of meeting buffer requirements. Since April 2019, around 20.07 LMT has been transferred from PSS to PSF to replenish buffer under PSF. Further, based on request from States and endorsement of the same by DACFW, 1.8 LMT Tur was procured under PSF at MSP during KMS 2019-20. Also, around 93 MT Masur was procured at market prices during RMS 2020 under PSF.

5. States/UTs are also being encouraged to set up their own State level PSF. Till date, financial assistance has been provided to Odisha, West Bengal, Andhra Pradesh, Telangana, Tamil Nadu and Assam.
6. Government of India has entered into a MoU with Mozambique to ensure assured supply of pulses (Tur and other pulses) in India. The MoU envisages imports of 2 LMT pulses during 2020-21.
7. Pulses from the PSF buffer are also being utilized for free supplies under PMGKAY and ANB package. This has helped in ensuring food security during the challenging times of COVID-19.
8. Government of India maintains buffer stocks of onion under PSF for making appropriate price stabilizing market interventions. Onion from buffer stock is released in a calibrated manner through retail intervention to retail agencies/State/UTs and open market sale during lean season/period to contain prices and availability. Buffer stock of about 1 LMT created from Rabi 2020 onion is released in a calibrated manner to moderate prices of onion since September 2020. The Government also conveyed approval for procurement of 1 LMT onion Kharif 2020-21. Analysis on onion price seasonality and effective policy measures is discussed in Box 4.

Box 4: Onion prices and buffer stock policy

Over the years, it has been observed that in the period August-November prices of onion skyrocket. This happens despite the government efforts to create a buffer stock to sell the onion when retail prices increase, exposing the absence of a suitable policy to ensure price stability of India's staple vegetable.

Retail prices of onion (2015-2020)



Source: PMC, DCA

Why Price Spikes in August to November?

Rabi harvesting takes place between March and May in most states and the crop is sold during June-July period, kharif harvesting takes place between October and November and the crop is available in the market till rabi harvest. The period between the two that is August to November is when we observe the prices of onion rise sharply.

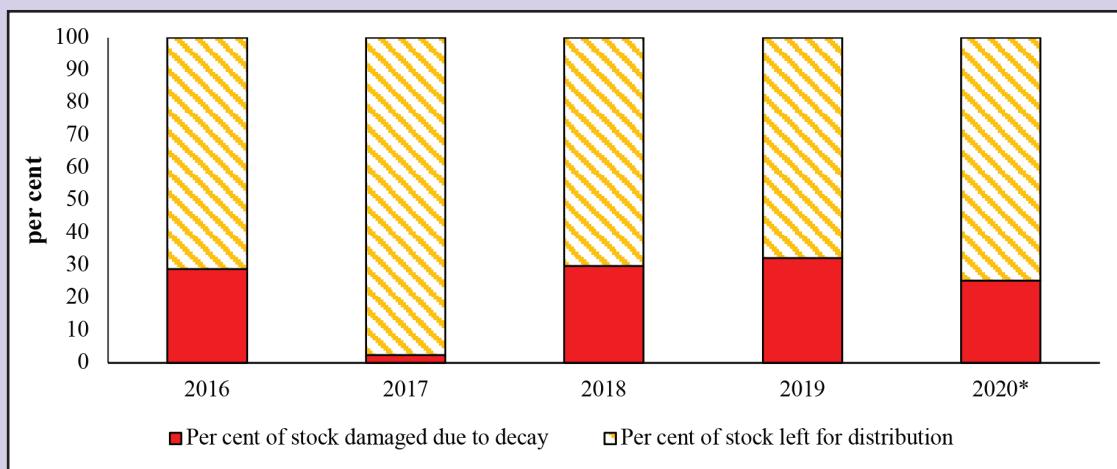
Recent policy measures by government:

Government has ensured that various pro-active measures are taken to curtail onion price rise. On 23.10.2020, stock limit on the onions was imposed under the Essential Commodities (Amendment) Act 2020 (25 MT for Wholesalers and 2 MT for Retailers) for a period up to 31.12.2020. In order to moderate the price rise, the government took a pre-emptive step by announcing a ban on onion export on 14.09.2020 so as to ensure availability to domestic consumers at reasonable rates, before the expected arrival of Kharif onion. The government also stepped-up disposal of onion through the built-up onion buffer stock from the Rabi onion 2020 of 1 LMT which was doubled since the quantity of last year. Further, Onions are also being disposed off through Open Market Sales. The government has also facilitated the import by the private traders, it has also been decided that MMTC would import red onions to meet the demand supply gap.

Effectiveness of government measures

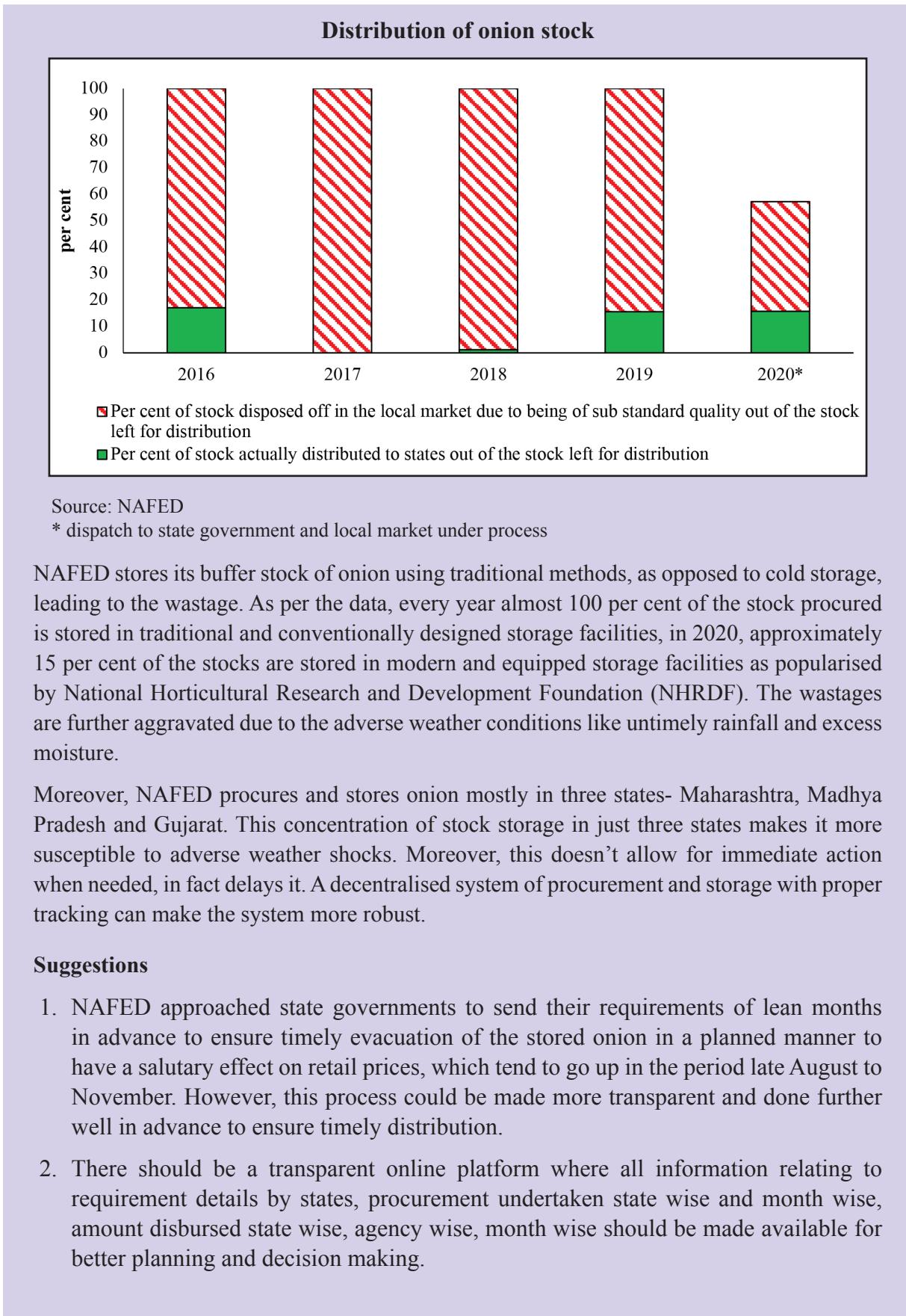
In 2019, NAFED created buffer stock of approx. 58288 tonnes, out of which around 18808 tonnes of onions were damaged, 33313 tonnes were distributed in the local market due to being of sub-standard quality and only 6167 tonnes could be distributed to states. This time, NAFED has created around 99000 tonnes, out of which 25,000 tonnes are likely to be damaged, however, stocks actually distributed to states are still low at 11653 tonnes (till November 2020).

Onion stock position



Source: NAFED

* dispatch to state government and local market under process



3. In Maharashtra, Gujarat, Haryana, Madhya Pradesh and Western Uttar Pradesh large-scale storage of onions is taken in conventionally-designed structures. In other states, the storage is taken only on small scale but now showing increasing trend after the post-harvest technology and improved storage structures have been popularized by NHRDF. Traditional storage practices result in substantial losses in stored onions, hence use of improved storage structures as well as use of good storer varieties, judicious use of fertilizers, timely irrigation and post-harvest technology are essential to reduce the losses in stored onions (Operation Greens portal).
4. Develop an eVIN like tracking system: eVIN (electronic vaccine intelligence network) aims to strengthen the evidence base for improved policy-making in vaccine delivery, procurement and planning for new antigens in India. For onion supply we do not need such a complicated system but a simple tracking system based on the principles of eVIN might be adequate. This can help provide real-time information on onion stocks, track storage temperature and moisture level and alert the authorities whenever any parameter is breached.
5. Use of dehydrated onions that has longer shelf life should be promoted for buffer stock purpose. Hydrated variety should be sold early.

CONCLUSION

5.36 During 2020-21, retail and wholesale inflation saw movements in the opposite directions. While headline CPI-C inflation saw an increase compared to the previous year, WPI inflation remained benign. Supply-side shocks especially owing to COVID-19 pandemic affected the retail inflation with food articles contributing to the overall rise in inflation. The easing of supply side restrictions, which saw inflation moderate in December 2020 are expected to continue this easing. Government interventions to augment the supply of commodities as well as to ensure the provision of essentials have likely softened the impact of the pandemic. Food inflation has already eased in December reducing overall inflationary pressures. Going forward, as food inflation eases further, overall inflation is expected to moderate further. On the other hand, improving demand conditions are likely to keep WPI inflation in the positive territory with improving pricing power for manufacturers.

CHAPTER AT A GLANCE

- Headline CPI inflation averaged 6.6 per cent in 2020-21 (Apr-Dec) and stood at 4.6 per cent in December 2020, mainly driven by rise in food inflation, which has increased from 6.7 per cent in 2019-20 to 9.1 per cent in 2020-21 (Apr-Dec), owing to build up in vegetable prices.
- At the global level, inflation remained benign on the back of subdued economic activity as a result of COVID-19 outbreak and sharp fall in international crude oil prices in advanced economies.

- The rural-urban difference in CPI inflation, which was high in 2019, saw a decline in 2020. Since November 2019, CPI-Urban inflation has closed the gap with CPI-Rural inflation. Food inflation has almost converged now, however, divergence in rural-urban inflation is observed in other components of CPI like fuel and light, clothing and footwear, miscellaneous etc.
- CPI headline and most of its sub groups inflation from April-October 2020 was mostly driven by substantial increase in price momentum, possibly due to the initial disruptions caused by COVID-19 lockdown. By November 2020, price momentum has moderated significantly for most sub groups and coupled with positive base effect helped ease inflation.
- During 2019-20 (Apr-Dec) as well as 2020-21 (Apr-Dec), the major driver of CPI-C inflation was the food and beverages group. Its contribution has increased to 59 per cent in 2020-21 (Apr-Dec) compared to 53.7 per cent in 2019-20 (Apr-Dec).
- Thali cost have increased between June 2020 and November 2020, they witnessed a sharp fall in the month of December reflecting the fall in the prices of many essential food commodities.
- State wise trend shows that CPI-C inflation increased in most of the states in the current year. However, regional variation persists. Inflation ranged between 3.2 per cent to 11 per cent across States/UTs in 2020-21 (Jun-Dec) compared to (-) 0.3 per cent to 7.6 per cent in the same period last year.
- Food inflation has been driving overall CPI-C inflation due to the relatively more weight of food items in the index. While food habits have undergone revisions over the decade since 2011-12 (base year of CPI), the base year of CPI needs revision. Further, in the context of increasing e-commerce transactions, it is important to include such new sources of price data for the construction price indices.
- Steps were taken to stabilise prices of food items like banning of export of onions, imposition of stock limit on onions, easing of restriction on imports of pulses etc.
- Apart from the short-term measures to curtail the upward price movement, we need to invest in medium to long-term measures such as decentralised cold storage facilities at production centres. Good storer varieties, judicious use of fertilizers, timely irrigation and post-harvest technology are essential to reduce the losses in stored onions (Operation Greens portal). Review of onion buffer stock policy is also essential. System needs to be developed to reduce wastages, efficient management and ensure timely release.
- Consistency in import policy also warrants attention. Increased dependence on imports of edible oils poses risk of fluctuations in import prices and imports impacting production and prices of domestic edible oil market, coupled with frequent changes in import policy of pulses and edible oils adds to confusion among farmers/producers and delay in imports.
- Gold prices saw sharp spike as investors turned to gold as a safe haven investment amid COVID-19 induced economic uncertainties. Compared to other assets, gold had returns during the year that were considerably higher.

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APPENDIX--1

ESSENTIAL COMMODITIES (AMENDMENT) ACT, 2020

Background

The Essential Commodities (EC) Act, 1955 and the Prevention of Black-Marketing and Maintenance of Supplies of Essential Commodities Act, 1980 are administered through the States/UTs. “Essential commodity” under the EC Act has been defined in Section 2A as a commodity specified under the Schedule. Presently seven commodities are included in the Schedule of the EC Act viz., (1) Drugs; (2) Fertilizer, whether inorganic, organic or mixed; (3) foodstuffs, including edible oilseeds and oils; (4) hank yarn made wholly from cotton; (5) petroleum and petroleum products; (6) raw jute and jute textiles; (7) (i) seeds of food-crops and seeds of fruits and vegetables; (ii) seed of cattle fodder; (iii) jute seed; (iv) cotton seed.

The Essential Commodities Act, 1955 empowers the Government to regulate essential commodities through regulation, by licences, permits, control of prices at which bought or sold, prohibiting/ withholding from sale collection of any information/ statistics, inspection of books and accounts etc. for maintaining or increasing their supplies and for securing their equitable distribution and availability at fair prices. Controls order dated 29.09.2016 has removed licensing requirements, stock limits and movement restrictions on identified foodstuffs unless expressly provided for. Under enabling orders a State may impose licensing, permits and other control measures. In respect of ‘Foodstuffs’ most of the powers of Central Government under the Act, have been delegated to the State Governments vide order dated 09.06.1978 and for ‘other than foodstuffs’ vide order dated 30.11.1974 with the direction that they shall exercise these powers. Exercising powers under the Act, various Ministries/Departments of the Central Government and State Governments/UT Administrations have issued Control Orders for regulating production, distribution, pricing etc. and trading of the commodities declared as essential.

Amendments to the EC Act

Recently, Government of India has amended the Essential Commodities Act of 1955 and inserted a new sub-section (1A) in Section 3 of the Essential Commodities (EC) Act, 1955.

Section 3(IA) (a) now provides that foodstuffs, including cereals, pulses, potato, onions, edible oil seeds and oils shall only be regulated under extra ordinary circumstances which may include war, famine, extra ordinary price rise and natural calamity of grave nature.

Section 3(IA)(b) provides that any action on imposing stock limit would be based on price trigger such as hundred per cent increase in retail price of horticultural produce and fifty percent increase in retail price of non-perishable agricultural foodstuff over the immediately preceding twelve months or average retail price of last five years whichever is lower; there is suitable exemption for exporters, processors and value chain participants of any agricultural produce as well as the Public Distribution System.

The Amendment includes a definition of value chain participants covering all the entities who add value to each stage from production to consumption. It is a visionary step, one which would radically alter the incomes and growth prospects of farmers and incentivize investment in the entire agri-sector.

Necessity of Amendment

The Essential Commodities (Amendment) Act 2020 was the culmination of a series of consultations and deliberations by the High Powered Committee for Transformation of Indian Agriculture comprising the Department of Agriculture and Farmers' Welfare, NITI Aayog, and the Chief Ministers of the States of Punjab, Maharashtra, Odisha, Madhya Pradesh, Gujarat, Arunachal Pradesh and Uttar Pradesh. The Committee had deliberated on several issues pertaining to the sector and made key recommendations, including, *inter alia*, the amendment of the Essential Commodities Act in order to boost investment in the sector, particularly for enhancing storage capacity for agricultural produce.

As the country was reeling under the adverse effects of COVID-19 pandemic, and the resilient agriculture sector showed its potential of making a significant contribution to economic activity, the need of the hour was to undertake reforms for boosting investment and growth. It was imperative that an enabling environment based on ease of doing business be created, and removing the fear of frequent statutory controls under the EC Act, was one such reform measure that had already been recommended by the afore-mentioned High-Powered Committee.

Amendments balance the interest of all the stakeholders: Amendments to the EC Act balance the interest of all the stakeholders including farmers, exporters, processors, other value chain participants and consumers by removing the fear of "excessive regulatory interference". At the same time, power has been retained with the Government for regulation under certain extraordinary circumstances.

The Amendment not only takes exporters, processors and other value chain participants out of the ambit of the stock limits under the EC Act but also puts in place a well-defined mechanism for imposition of these limits. Now price triggers have been well defined - an increase of 100 per cent for perishable and 50 per cent for non-perishable foodstuffs.

Provide farmers greater choice in selling their produce: Amendments to the EC Act along with the other Ordinances allowing sale and purchase of farm produce outside notified market yards, facilitating contract farming and allowing farmers to engage in direct marketing, would greatly benefit the farmers and help them realise better price for their produce. Now physical market participants can directly buy from the farmers without the fear of excessive regulation and stock limits under the EC Act. This would improve the bargaining power of farmers.

Attract private investment: "Excessive regulatory interference" under the EC Act was coming in the way of investment in the agriculture sector particularly in post-harvesting activities. Private sector was hesitant in investing in cold chains and storage facilities for perishable items as most of these commodities were under the ambit of the EC Act and stock limits were attracted suddenly. Now any limits under EC Act shall not be applicable to exporters, processors and other value chain participants. This would now attract private investment which would help farmers in better storage and prices.

Promote value chain participants which would minimize farm wastages: The Annual Report of MoFPI (2018-19) quotes a study by Central Institute of Post-Harvest Engineering & Technology (CIPHET) which estimates the annual value of harvest and post-harvest losses of major agricultural commodities at Rs.92,651 crore using the production data of 2012-13 at 2014 wholesale prices. Most of the wastage is occurring in the case of fruits and vegetables. Farmers

suffer huge losses when there are bumper harvests of perishable commodities. With adequate processing facilities, much of this wastage can be reduced thus providing remunerative prices to producers as well as ensuring greater supply to consumers. Amendment to EC Act would provide a much needed fillip to the value chain participants as their fears of sudden regulation of stock limit in these commodities would be adequately addressed.

Help in price stabilization: What is needed today is the entry of market players who can contribute to price stability for farmers through their investments. Exempting agri-food commodities from restrictive provisions of EC Act will attract organised sector to agriculture trade, much needed for price stabilization, investments in cold storages and logistics, and modernization of the food supply chain. This will also remove inherent fears of investors about excessive regulatory interference emanating out of EC Act. The freedom to produce, hold, move, distribute and supply will lead to harnessing of economies of scale and attract private sector/foreign direct investment into agriculture sector.

Safeguarding Consumers: The Government, while liberalizing the regulatory environment in order to boost farmers' income and attract investment to the agriculture sector, has also ensured that interests of consumers are safeguarded. It has been provided in the Amendment, that in situations such as war, famine, extraordinary price rise and natural calamity, such agricultural foodstuff can be regulated. Whenever there is unprecedented price rise, provision has been made for independent and objective assessment that this price rise needs to be dealt with through imposition of stock limits. The price of that commodity during the preceding year will be compared with the average prices over the preceding five years; the lower of the two figures will be the base figure and if prevailing price of that commodity is 100 per cent higher (for perishable commodity), or 50 per cent higher (for non-perishable commodity), this will be the trigger for imposing stock limits. However, the installed capacity of a value chain participant and the export demand of an exporter will remain exempted from such stock limit imposition.

From the perspective of protecting consumers, Government now has many other tools such as buffers of various essential food items (cereals, pulses and onions) and appropriate trade policy instruments such as export restriction and import liberalizations, there is planned intervention of Government for managing prices.

Circumstances when stock limits may be imposed

The amendment provides for objective criteria for taking any decision on the imposition of stock limits on such agri food stuff. The Essential Commodities (Amendment) Act, 2020 provides the circumstances under which the supply of agricultural food stuffs including cereals, pulses, potato, onion, edible oilseeds and oils shall be regulated, and they are as follows: war, famine, extraordinary price rise and natural calamity of grave nature. The condition for imposition and regulation of stock limit of agricultural produce is "100% increase in the retail price of horticultural produce; or 50% increase in the retail price of nonperishable agricultural foodstuff over the price prevailing immediately preceding one year or average retail price of last 5 years whichever is lower." Based on the objective criteria of the price of onion as on Oct 21, 2020 of Rs.55.6 per kg, in comparison with the price on Oct 21, 2019 of Rs.45.53 per kg and the average retail prices of the last five years of Rs.25.86 per kg, the decision to regulate the sale of onion by imposing stock limits to check hoarding, was taken. A notification to this effect was issued on Oct 23, 2020. The stock limits are fixed as 25 MT for wholesalers and 2 MT for retailers.

Power of State Government after amendment

The Essential Commodities (Amendment) Act, 2020 has not curbed the powers of the State Governments to enforce stock limits on essential commodities or take actions on hoarders and profiteers. The state would still exercise all its powers including issuance of permits, licences, etc. for regulating the production, distribution, supply, movement, transportation, etc. of the essential commodities. This is amply clear from the advisory issued on Oct 29, 2020 to all states suggesting that three days' time after purchase of onion from Mandis be allowed for packing, grading etc., before any action is taken in pursuance to the order imposing stock limits.

APPENDIX - 2

**CHRONOLOGY OF THE INTELLECTUAL DEVELOPMENT
ESSENTIAL COMMODITIES (AMENDMENT) ACT, 2020**

S. No.	Name of Commission/ Committee /Report	Year	Chairman/ Organization	Recommendations
1	Expert Committee on Marketing Infrastructure and Agricultural Marketing Reforms	2001	Shri. Shankerlal Guru	The Essential Commodities Act, 1955 needs to be repealed for an uninhibited free market system
2	Task Force on Employment Opportunities	2001	Shri. Montek Singh Ahluwalia	Essential Commodities Act should be repealed to extend the benefit of de-control to agriculture
3	Standing Committee of Union Ministers and Chief Ministers on Food Management and Agricultural Exports	Committee's Meeting held on 6th July, 2001		Progressive dismantling of controls under the Essential Commodities Act
4	Standing Committee of Union Ministers and Chief Ministers on Food Management and Agricultural Exports	Committee's Meeting held on 23rd March, 2002		While taking note of the Government of India decision to remove restrictions on storage, movement, and distribution of wheat, paddy, rice, coarse grains, sugar, edible oilseeds and edible oils, recommended that similar restrictions relating to pulses also need to be removed and that the States would also carry out further review to reduce various Control Orders issued by the States in respect of other commodities.
5	National Commission on Farmers: Third Report	2005	Prof. M.S. Swaminathan	It would be better if the ECA, 1955, was put under suspended animation for the present and revived by Government notification if any emergency situation develops, for a limited time for a specific commodity in a specified area.

S. No.	Name of Commission/ Committee /Report	Year	Chairman/ Organization	Recommendations
				After watching for a few years and being satisfied that under the changed environment it is possible to tackle even emergency situations with market operations, it may be possible to scrap the Act all together.
6	National Commission on Farmers: Fourth Report	2006	Prof. M.S. Swaminathan	The Essential Commodities Act and other legal instruments including the State Agriculture Produce Marketing Committee Acts [APMC Acts] relating to marketing, storage and processing of agriculture produce need to be reviewed in order to meet the requirements of modern agriculture and attracting private capital in this sector.
7	Committee of State Ministers, In-charge of Agriculture Marketing to Promote Reforms	2013	Shri. Harshvardhan Patil	Under Essential Commodities Act, there is a need to have distinction between genuine service providers and black marketeers/hoarders to encourage investment and better service delivery to the farmers. There should be a stable and long term National Policy on storage and movement of agricultural produce to achieve the objective of Unified National Market. It is recommended that Contract Farming Sponsors and Direct Marketing licensees may be exempted from the stock limits up to six months of their requirement in the interest of trade and facilitating long term investment.

S. No.	Name of Commission/ Committee /Report	Year	Chairman/ Organization	Recommendations
8	Economic Survey 2016-17 Volume 2	2017	—	The stock limits imposed under ECA, 1955 end up curtailing demand for farm produce and so prices. The ideal situation relates to doing away with the stock holding limits along with the ECA, 1955 as envisaged in the ‘Removal of Licensing requirements, Stock limits and Movement Restrictions on Specified Foodstuffs Order, 2016,’ according to which all restrictions on permit/licensing requirements, stock limits and movement restrictions were to be removed.
9	Standing Committee on Agriculture (Seventeenth Lok Sabha, 2018-19): Agricultural Marketing and Role of Weekly Gramin Haats	2019	Shri. Hukmdev Narayan Yadav	Under Essential Commodities Act, there is a need to have distinction between genuine service providers and black marketeers/hoarders to encourage investment and better service delivery to the farmers. Sponsors and Direct Marketing licensees may be exempted from the stock limits up to six months of their requirement in the interest of trade and facilitating long-term investment.
10	High Powered Committee of Chief Ministers, headed by Chief Minister, Maharashtra	2019	NITI Aayog	<ol style="list-style-type: none"> 1. Classify commodities into two priority categories 2. Priority one (1) – Controlled commodities <ul style="list-style-type: none"> a. Drugs – essential for chronic diseases, rare illness and for disaster management b. Petroleum and Petroleum products – high import dependence, impacts all trade and urgent necessity for humanitarian logistics

S. No.	Name of Commission/ Committee /Report	Year	Chairman/ Organization	Recommendations
			—	<p>c. Fertilizer, whether inorganic, organic or mixed.</p> <p>3. Priority two(2)—de-controlled commodities, Controls may be placed only in case of war, for safe operations of defence forces, extraordinary instance related to national security or in times of disaster and inordinate price rises or inordinate supply deficiencies.</p> <p>a. Foodstuffs</p> <p>b. Seeds of agricultural produce</p>
11	Economic Survey 2019-20 Volume 1	2020	—	The Act is anachronistic as it was passed in 1955 in an India worried about famines and shortages; it is irrelevant in today's India and must be jettisoned.
12	Essential Commodities (Amendment) Act, 2020	2020	—	The supply of such food-stuffs, including cereals, pulses, potato, onions, edible oilseeds and oils, as the Central Government may, by notification in the Official Gazette, specify, may be regulated only under extraordinary circumstances which may include war, famine, extraordinary price rise and natural calamity of grave nature.