

Inflation Monitor

January 2021

(New Base: 2015-16)



State Bank of Pakistan

Statistics & DWH Department

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Review

1. Inflation in Brief

- a) National CPI inflation (2015-16=100) is recorded at 5.7 percent on year-on-year basis in January 2021 as compared to 8.0 percent in the previous month and 14.6 percent during the corresponding month of last year.
- b) National CPI inflation on month-on-month basis is recorded at -0.2 percent in January 2021 as compared to -0.7 percent in the previous month and 2.0 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at 0.05 percent in January 2021 compared to 0.23 percent in the previous month.
- c) Urban CPI inflation (2015-16=100) is recorded at 5.0 percent on year-on-year basis in January 2021 as compared to 7.0 percent in the previous month and 13.4 percent during the corresponding month of last year.
- d) Urban CPI inflation on month-on-month basis is recorded at -0.2 percent in January 2021 as compared to -0.3 percent in the previous month and 1.7 percent during corresponding month of last year. Seasonally adjusted month-on-month Urban CPI inflation is recorded at 0.02 percent in January 2021 compared to 0.56 percent in the previous month.
- e) Rural CPI inflation (2015-16=100) is recorded at 6.6 percent on year-on-year basis in January 2021 as compared to 9.5 percent during the previous month and 16.3 percent during the corresponding month of last year.
- f) Rural CPI inflation on month-on-month basis is recorded at -0.3 percent in January 2021 as compared to -1.2 percent in the previous month and 2.4 percent during the corresponding month of last year. Seasonally adjusted month-on-month Rural CPI inflation is recorded at 0.10 percent in January 2021 compared to -0.25 percent in the previous month.

- g) Urban Core inflation (trimmed) on year-on-year basis is recorded at 5.7 percent in January 2021 as compared to 6.2 percent in the previous month and 10.3 percent during the corresponding month of last year.
- h) On month-on-month basis, the Urban Core inflation (trimmed) is recorded at 1.0 percent in January 2021 as compared to 0.4 percent in the previous month and 1.2 percent during the corresponding month of last year.
- i) Rural Core inflation (trimmed) on year-on-year basis is recorded at 8.1 percent in January 2021 as compared to 8.8 percent in the previous month and 12.7 percent during the corresponding month of last year.
- j) On month-on-month basis, the Rural Core inflation (trimmed) is recorded at 1.2 percent in January 2021 as compared to 0.6 percent in the previous month and 1.9 percent during the corresponding month of last year.
- k) Urban Core (Non-food, non-energy (NFNE)) inflation on year-on-year basis is recorded at 5.4 percent in January 2021 as compared to 5.6 percent in the previous month. It was 7.9 percent during the corresponding month of last year.
- l) Urban Core (NFNE) inflation on month-on-month basis recorded at 0.9 percent in January 2021 as compared to 0.4 percent in the previous month. It was 1.1 percent during the corresponding month of last year.
- m) Rural Core (NFNE) inflation on year-on-year basis is recorded at 7.8 percent in January 2021 as compared to 7.7 percent in the previous month and 9.0 percent during the corresponding month of last year.
- n) Rural Core (NFNE) inflation on month-on-month basis recorded at 1.1 percent in January 2021 as compared to 0.5 percent in the previous month and 1.0 percent during the corresponding month of last year.

- o) WPI inflation on year-on-year basis recorded at 6.4 percent in January 2021 as compared to 5.7 percent in the previous month and 15.4 percent during the corresponding month of last year.
- p) WPI inflation on month-on-month basis recorded at 2.5 percent in January 2021 as compared to 0.3 percent in the previous month. It was 1.8 percent in the corresponding month of last year.
- q) SPI inflation on year-on-year basis recorded at 6.4 percent in January 2021 as compared to 7.9 percent in the previous month. It was 19.5 percent in the corresponding month of last year.
- r) SPI inflation on month-on-month basis recorded at -0.4 percent in January 2021 as compared to -1.3 percent in the previous month. It was 1.0 percent in the corresponding month of last year.

2. Heat-maps of CPI inflation

The heat map visually elaborates the evolution of inflation. A heat-map for National, Urban and Rural CPI inflation (YoY/MoM) and their important sub-indexes for the time span of last thirteen months is presented. The inflation is compared with the benchmark of medium-term inflation target of 8.5 percent and 0.75 percent on YoY and MoM basis, respectively. Greener areas indicate low inflation pressures and increasing order of red (light to dark color spectrum i.e. light green to orange to brown to red) represents higher and higher inflationary pressures.

		Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Headline	National	14.6	12.4	10.2	8.5	8.2	8.6	9.3	8.2	9.0	8.9	8.3	8.0	5.7
	Urban	13.4	11.2	9.3	7.7	7.3	7.6	7.8	7.1	7.7	7.3	7.0	7.0	5.0
	Rural	16.4	14.2	11.7	9.8	9.7	10.0	11.6	9.9	11.1	11.3	10.5	9.5	6.6
Food	Urban	19.5	15.2	13.0	10.4	10.6	12.9	15.1	11.3	12.4	13.9	13.0	12.6	7.3
	Rural	23.8	19.7	15.5	12.9	13.7	15.2	17.8	13.5	15.8	17.7	16.1	13.4	7.2
Core	Urban	7.9	8.0	7.4	6.4	6.3	6.5	5.3	5.6	5.5	5.6	5.6	5.6	5.4
	Rural	9.0	9.4	9.4	8.5	8.4	8.8	7.8	7.6	7.8	7.6	7.4	7.7	7.8

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key

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Heat-map of National, Urban and Rural CPI inflation (MoM)

		Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Headline	National	2.0	-1.1	0.0	-0.8	0.3	0.8	2.5	0.6	1.5	1.7	0.8	-0.7	-0.2
	Urban	1.7	-1.1	0.1	-0.7	0.3	0.7	2.2	0.8	1.3	1.3	0.6	-0.3	-0.2
	Rural	2.4	-1.0	-0.1	-1.1	0.3	1.0	3.0	0.4	2.0	2.4	1.1	-1.2	-0.3
Food	Urban	2.7	-1.4	0.6	-1.0	1.5	1.8	3.0	-0.3	3.0	2.8	1.6	-2.1	-2.1
	Rural	3.4	-1.6	-0.3	-1.7	1.4	2.0	4.0	-0.9	3.8	4.3	2.0	-3.4	-2.2
Core	Urban	1.1	0.2	0.3	0.2	0.4	0.4	0.6	0.7	0.3	0.6	0.3	0.4	0.9
	Rural	1.0	0.5	0.6	0.3	0.4	0.7	1.1	0.8	0.4	0.6	0.3	0.5	1.1

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key

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Heat-map of National CPI inflation (YoY)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
National	100.00	14.6	12.4	10.2	8.5	8.2	8.6	9.3	8.2	9.0	8.9	8.3	8.0	5.7
Food and non-alcoholic Beverages	34.58	23.7	18.4	14.7	11.7	12.2	14.6	17.8	12.9	14.7	16.6	15.1	13.3	6.7
Alcoholic Beverages, Tobacco	1.02	17.9	18.5	18.6	19.6	19.5	14.2	5.0	5.8	5.9	6.0	5.9	6.0	5.8
Clothing and footwear	8.60	9.6	10.1	11.0	10.2	10.3	11.0	10.3	9.2	9.1	9.0	9.4	9.6	9.5
Housing, water, Elec., Gas and other fuels	23.63	9.6	6.8	4.9	5.1	6.4	5.4	4.2	6.0	6.1	2.7	2.6	3.4	3.4
Furnishing and household equipment maintenance	4.10	10.1	10.0	10.1	9.0	8.7	8.8	7.8	7.5	7.9	8.0	7.7	7.7	7.6
Health	2.79	11.8	12.0	12.4	10.5	9.8	9.3	7.8	7.7	8.3	7.8	7.6	8.1	8.5
Transport	5.91	18.6	19.2	11.5	3.4	-7.5	-10.2	-4.5	-3.4	-1.5	-1.5	-4.1	-3.5	-2.6
Communication	2.21	4.0	3.9	3.9	1.7	1.6	1.6	0.3	0.3	0.3	0.3	0.6	0.5	0.5
Recreation and culture	1.59	6.5	6.6	5.9	5.1	4.9	4.8	3.8	3.5	3.9	3.9	4.2	4.4	4.6
Education	3.79	7.3	7.4	4.5	3.2	2.0	2.0	1.1	1.0	1.0	1.4	1.3	1.2	1.3
Restaurants and hotels	6.92	7.4	8.7	8.7	8.5	8.6	9.0	7.5	8.0	8.2	8.9	9.3	9.9	8.9
Misc. goods and services	4.87	11.4	11.4	11.8	11.9	11.9	11.6	11.7	13.6	12.2	11.6	11.9	11.9	11.5

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key

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Heat-map of Urban CPI inflation (YoY)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Urban	100.00	13.4	11.2	9.3	7.7	7.3	7.6	7.8	7.1	7.7	7.3	7.0	7.0	5.0
Food and non-alcoholic Beverages	30.42	22.0	16.4	13.7	10.7	10.9	13.8	16.9	11.9	13.3	14.9	13.7	13.1	6.7
Alcoholic Beverages, Tobacco	0.85	16.8	17.7	17.8	18.8	19.0	13.3	4.7	5.5	5.7	6.2	6.7	6.6	6.2
Clothing and footwear	8.01	9.0	9.6	9.9	9.5	9.5	10.1	9.4	8.0	8.0	8.0	9.1	8.8	8.5
Housing, water, Elec., Gas and other fuels	27.03	9.7	6.9	5.1	5.1	6.5	5.6	3.6	5.4	5.5	2.3	2.2	2.8	2.9
Furnishing and household equipment maintenance	4.09	10.4	10.0	9.8	8.3	7.7	7.7	6.3	6.2	6.3	6.6	6.4	6.1	6.4
Health	2.31	11.5	11.7	12.2	9.4	8.7	8.4	5.9	6.7	7.2	7.3	7.1	7.4	7.4
Transport	6.14	19.4	19.9	12.2	2.1	-6.5	-9.5	-4.8	-3.7	-1.6	-1.7	-4.5	-3.6	-2.8
Communication	2.35	5.3	5.3	5.1	2.3	2.2	2.1	0.4	0.4	0.3	0.3	0.7	0.6	0.6
Recreation and culture	1.73	6.1	6.1	5.6	4.9	4.6	4.4	3.1	2.7	2.9	2.9	3.2	3.3	3.3
Education	4.88	7.5	7.5	4.5	3.4	1.9	1.9	1.1	1.0	0.9	1.2	1.1	1.0	1.1
Restaurants and hotels	7.41	6.5	7.7	7.5	7.4	7.2	7.7	6.7	8.2	8.2	8.8	9.3	10.0	8.7
Misc. goods and services	4.77	10.7	10.1	10.6	11.0	10.9	10.6	10.4	12.6	10.5	9.7	10.4	10.6	10.4

Source: Pakistan Bureau of Statistics and SBP staff estimates

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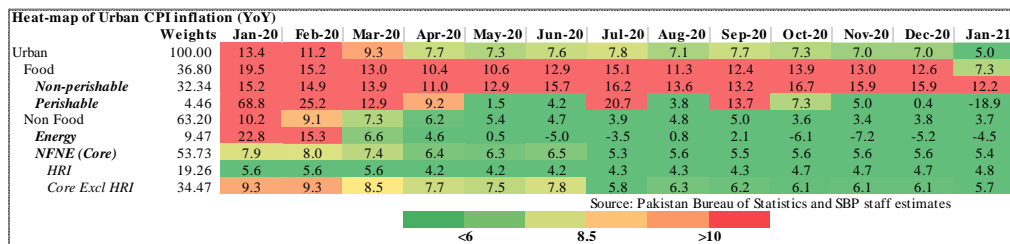
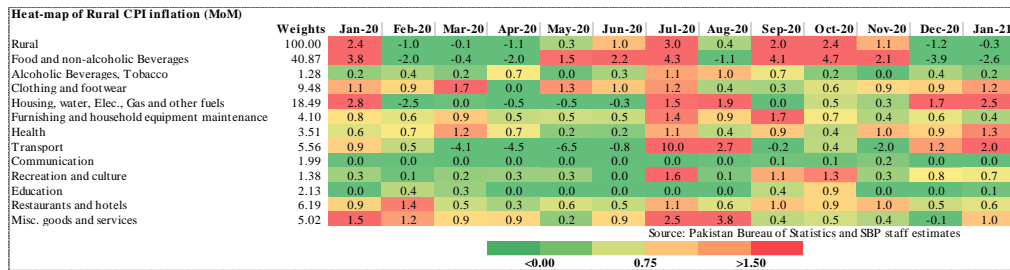
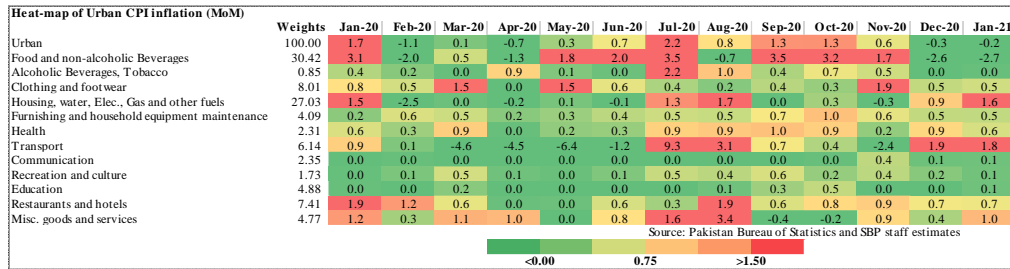
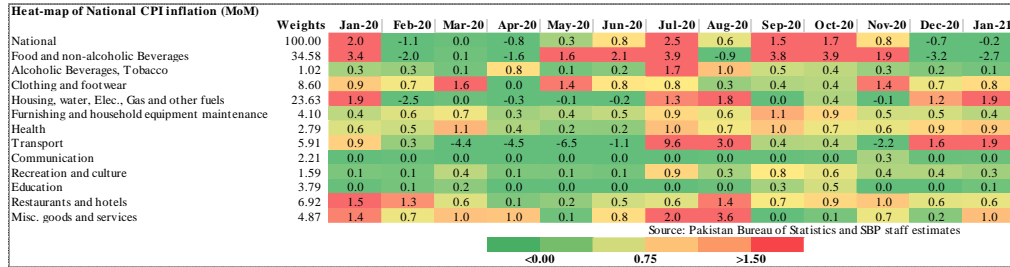
Heat-map of Rural CPI inflation (YoY)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Rural	100.00	16.4	14.2	11.7	9.8	9.7	10.0	11.6	9.9	11.1	11.3	10.5	9.5	6.6
Food and non-alcoholic Beverages	40.87	25.5	20.6	15.8	12.8	13.7	15.5	18.7	14.0	16.4	18.4	16.7	13.5	6.6
Alcoholic Beverages, Tobacco	1.28	19.2	19.4	19.5	20.4	20.1	15.3	5.4	6.1	6.1	5.7	5.0	5.4	5.3
Clothing and footwear	9.48	10.2	10.8	12.3	11.0	11.4	12.2	11.5	10.6	10.5	10.1	9.9	10.6	10.7
Housing, water, Elec., Gas and other fuels	18.49	9.4	6.6	4.6	5.2	6.0	4.9	5.5	7.2	7.4	3.7	3.6	4.9	4.5
Furnishing and household equipment maintenance	4.10	9.7	9.9	10.6	10.1	10.2	10.4	10.1	9.5	10.3	10.1	9.6	10.0	9.5
Health	3.51	12.1	12.4	12.6	11.6	10.9	10.1	9.7	8.7	9.3	8.3	8.2	8.8	9.6
Transport	5.56	17.2	18.0	10.2	2.3	-9.0	-11.5	-3.8	-3.0	-1.4	-1.1	-3.5	-3.3	-2.2
Communication	1.99	1.7	1.6	1.6	0.8	0.7	0.6	0.3	0.2	0.2	0.4	0.4	0.4	0.4
Recreation and culture	1.38	7.3	7.3	6.5	5.4	5.5	5.5	5.2	5.0	5.8	5.7	6.0	6.6	7.0
Education	2.13	6.7	7.1	4.5	2.5	2.4	2.4	1.2	0.7	1.2	2.1	2.1	2.0	2.1
Restaurants and hotels	6.19	8.9	10.3	10.8	10.4	11.1	11.3	9.0	7.5	8.4	9.0	9.3	9.6	9.3
Misc. goods and services	5.02	12.5	13.4	13.6	13.2	13.5	13.2	13.8	15.0	14.5	14.3	14.1	13.8	13.2

Source: Pakistan Bureau of Statistics and SBP staff estimates

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Heat-map of Rural CPI inflation (YoY)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Rural	100.00	16.4	14.2	11.7	9.8	9.7	10.0	11.6	9.9	11.1	11.3	10.5	9.5	6.6
Food	45.95	23.8	19.7	15.5	12.9	13.7	15.2	17.8	13.5	15.8	17.7	16.1	13.4	7.2
<i>Non-perishable</i>	40.16	17.0	17.6	15.4	12.7	14.1	16.2	17.6	15.8	16.3	19.5	18.9	16.8	13.1
<i>Perishable</i>	5.79	90.6	41.2	18.2	13.5	11.4	10.9	25.4	3.7	16.9	13.4	7.4	-1.6	-23.9
Non Food	54.05	10.5	9.8	8.5	7.4	6.4	5.8	6.5	6.8	7.2	5.8	5.5	6.1	6.1
<i>Energy</i>	11.41	15.9	11.4	5.4	3.2	-1.3	-5.3	1.4	3.6	5.0	-0.8	-1.6	0.6	0.1
<i>NFNE (Core)</i>	42.64	9.0	9.4	9.4	8.5	8.4	8.8	7.8	7.6	7.8	7.6	7.4	7.7	7.8
<i>HRI</i>	8.61	6.3	6.3	6.3	5.1	5.1	5.1	4.9	4.9	4.9	5.2	5.2	5.2	5.8
<i>Core Excl HRI</i>	34.03	9.7	10.2	10.2	9.3	9.3	9.7	8.6	8.3	8.4	8.3	8.0	8.3	8.2

Source: Pakistan Bureau of Statistics and SBP staff estimates

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Heat-map of Urban CPI inflation (MoM)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Urban	100.00	1.7	-1.1	0.1	-0.7	0.3	0.7	2.2	0.8	1.3	1.3	0.6	-0.3	-0.2
Food	36.80	2.7	-1.4	0.6	-1.0	1.5	1.8	3.0	-0.3	3.0	2.8	1.6	-2.1	-2.1
<i>Non-perishable</i>	32.34	3.6	0.2	0.0	-1.4	2.6	2.7	1.5	0.8	1.4	2.9	0.6	0.0	0.3
<i>Perishable</i>	4.46	0.7	-12.6	3.5	-0.8	-2.6	-1.6	14.5	-8.4	15.4	4.4	6.9	-14.3	-18.7
Non Food	63.20	1.1	-0.9	-0.1	-0.5	-0.4	0.0	1.7	1.5	0.2	0.3	0.1	0.7	1.1
<i>Energy</i>	9.47	1.2	-6.2	-2.1	-4.2	-4.6	-2.4	7.9	5.6	-0.3	-0.8	-1.3	2.7	2.0
<i>NFNE (Core)</i>	53.73	1.1	0.2	0.3	0.2	0.4	0.4	0.6	0.7	0.3	0.6	0.3	0.4	0.9
<i>HRI</i>	19.26	1.9	0.0	0.0	0.3	0.0	0.0	1.6	0.0	0.0	0.9	0.0	0.0	2.0
<i>Core Excl HRI</i>	34.47	0.7	0.3	0.4	0.2	0.6	0.7	0.1	1.1	0.4	0.4	0.5	0.6	0.3

Source: Pakistan Bureau of Statistics and SBP staff estimates

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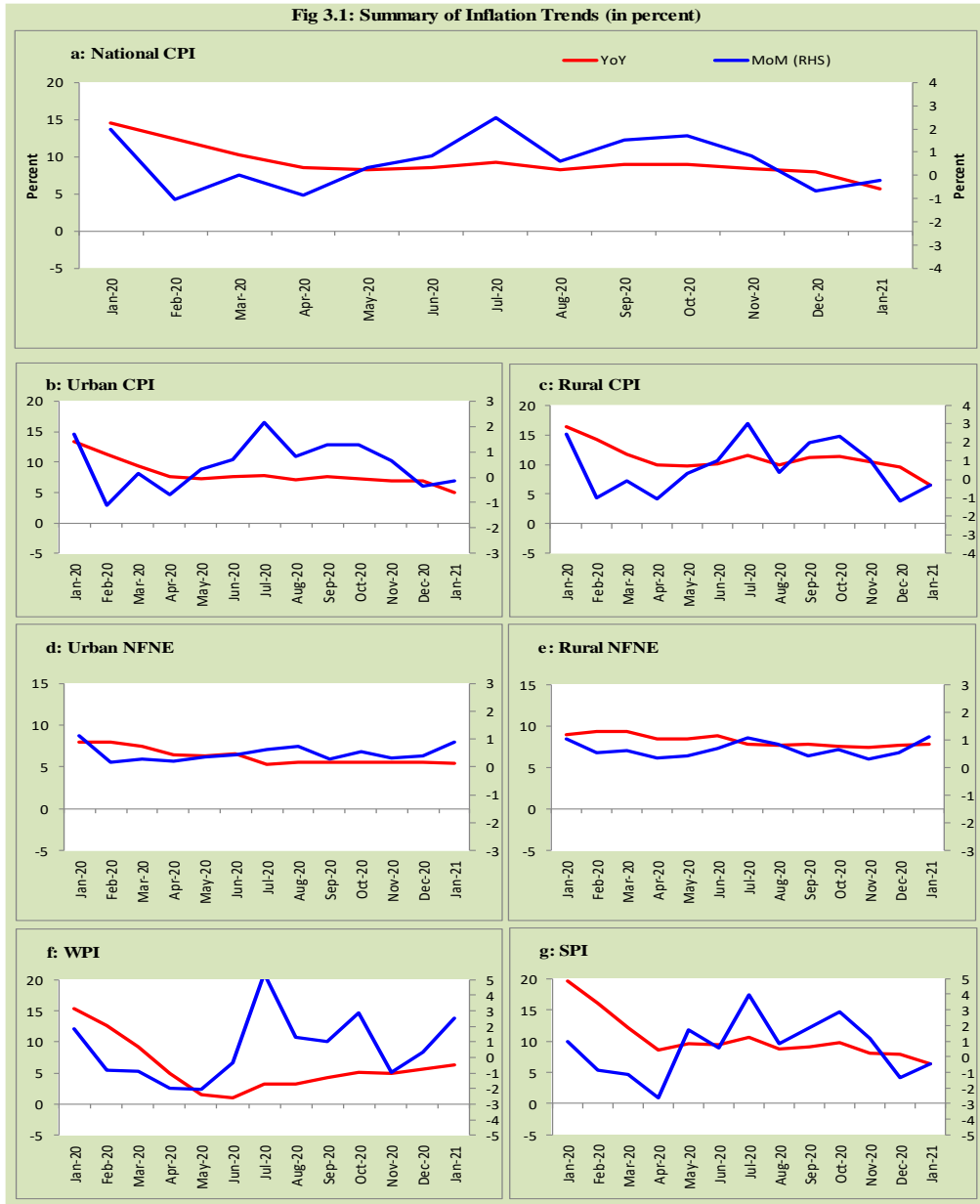
Heat-map of Rural CPI inflation (MoM)

	Weights	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Rural	100.00	2.4	-1.0	-0.1	-1.1	0.3	1.0	3.0	0.4	2.0	2.4	1.1	-1.2	-0.3
Food	45.95	3.4	-1.6	-0.3	-1.7	1.4	2.0	4.0	-0.9	3.8	4.3	2.0	-3.4	-2.2
<i>Non-perishable</i>	40.16	4.3	1.0	-1.0	-1.5	2.0	3.1	2.2	0.8	1.9	3.0	1.3	-1.3	1.0
<i>Perishable</i>	5.79	1.3	-16.1	2.9	-4.9	-1.7	-3.2	17.3	-11.4	17.9	14.1	5.9	-16.0	-21.6
Non Food	54.05	1.5	-0.4	0.1	-0.5	-0.5	0.1	2.2	1.5	0.3	0.5	0.2	1.0	1.5
<i>Energy</i>	11.41	3.3	-3.8	-1.8	-3.6	-4.2	-2.0	6.7	3.9	-0.1	0.1	-0.1	2.9	2.9
<i>NFNE (Core)</i>	42.64	1.0	0.5	0.6	0.3	0.4	0.7	1.1	0.8	0.4	0.6	0.3	0.5	1.1
<i>HRI</i>	8.61	2.2	0.0	0.0	0.4	0.0	0.0	1.7	0.0	0.0	0.8	0.0	0.0	2.8
<i>Core Excl HRI</i>	34.03	0.7	0.7	0.8	0.3	0.5	0.8	0.9	1.0	0.5	0.6	0.4	0.6	0.7

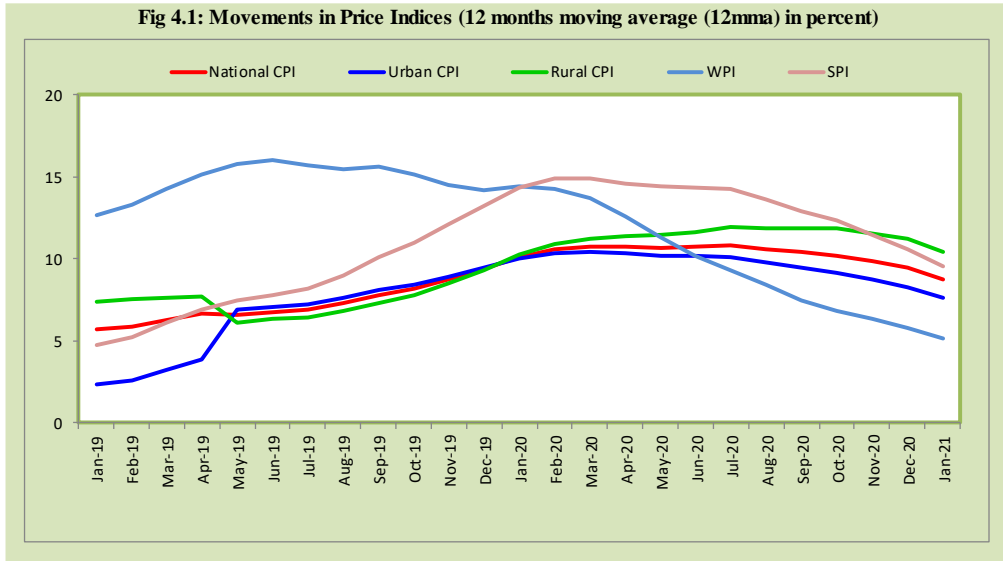
Source: Pakistan Bureau of Statistics and SBP staff estimates

<0.00 0.75 >1.50

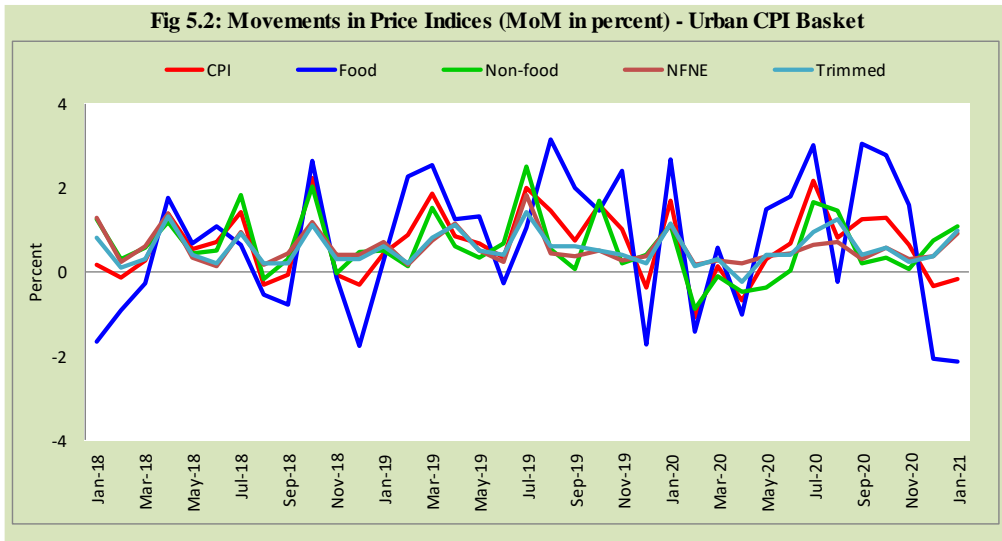
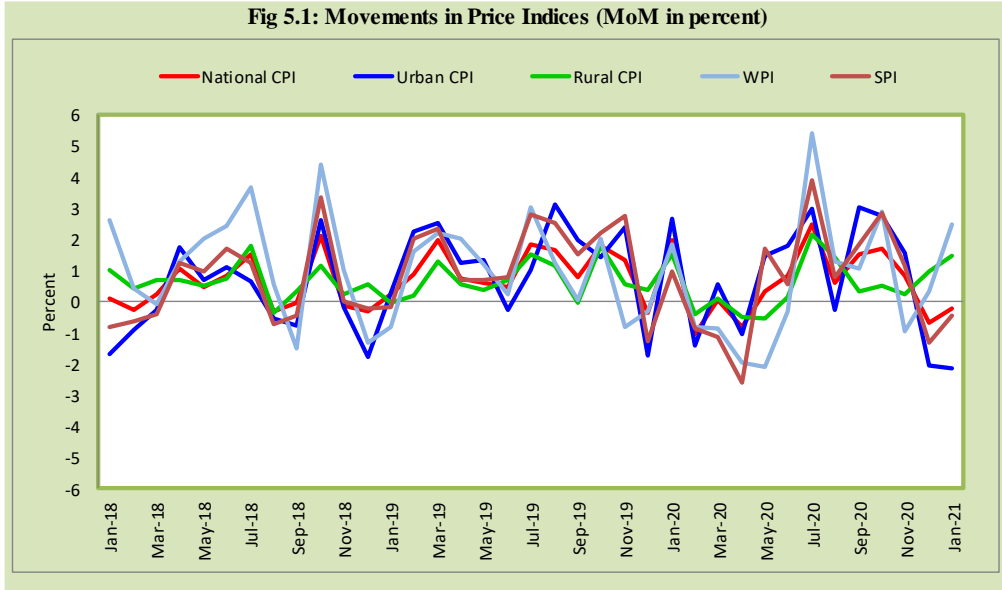
3. Trends in Inflation

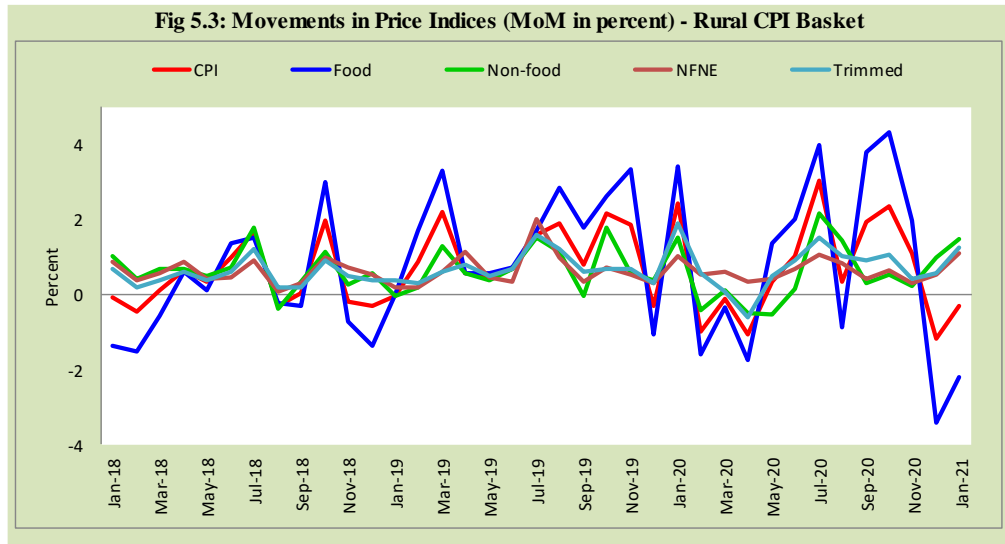


4. Movement in Price Indices (Moving Averages)



5. Movement in Price Indices (Month-on-Month)

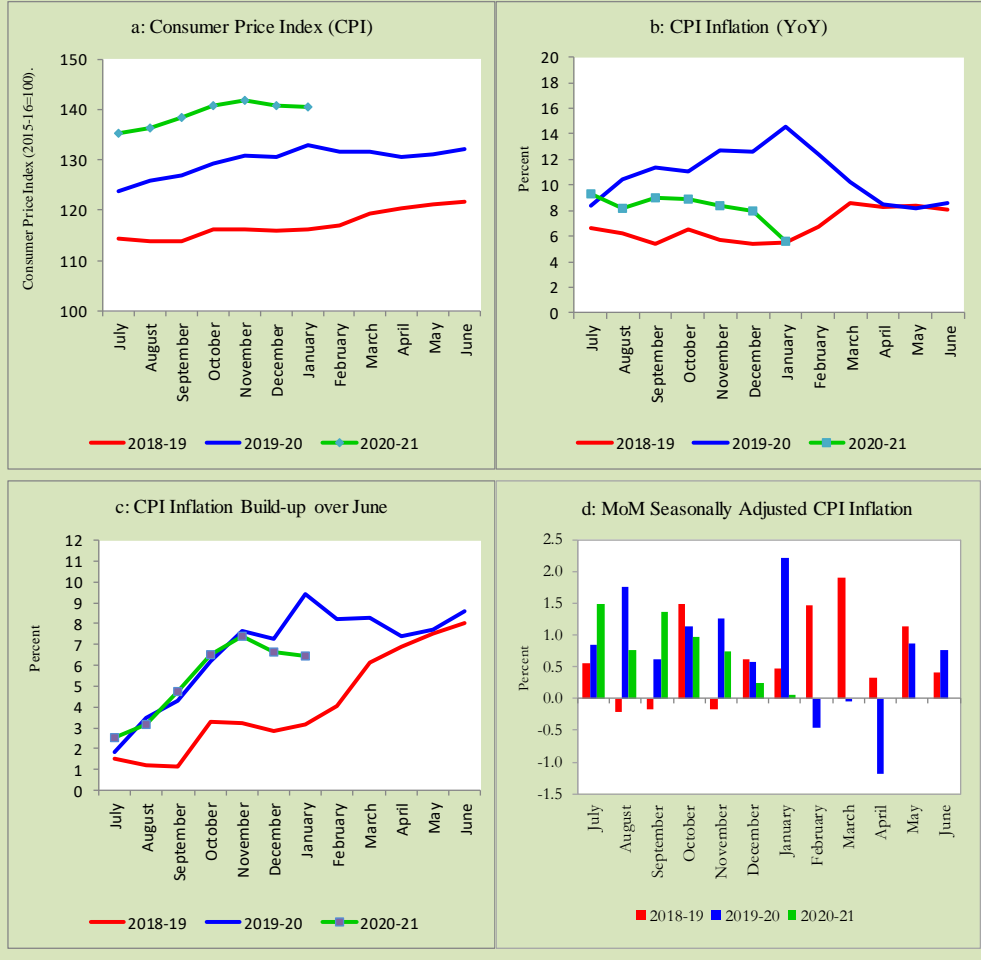




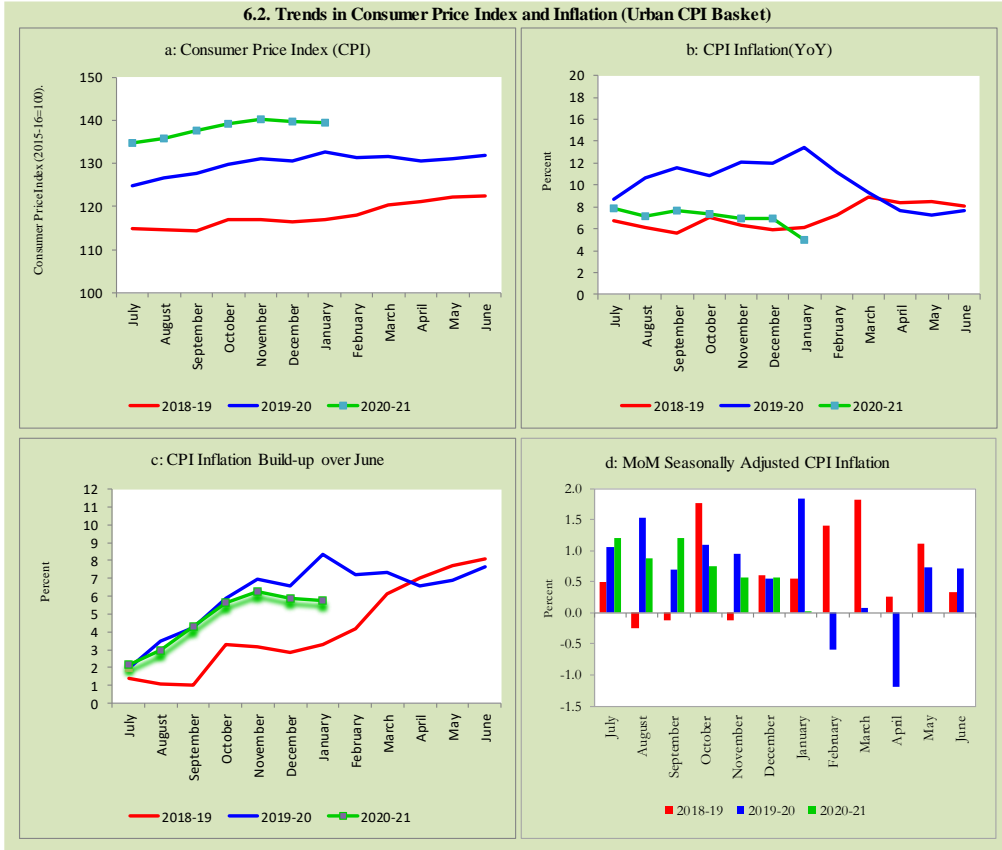
6. Trends in Consumer Price Indices and Inflation

Monthly Consumer Price Indices, YoY growth rates and inflation build up over June along with seasonally adjusted (MoM) growth rates in CPI (National, Urban and Rural) is summarized in the following graphs (Figure 6.1 to 6.3).

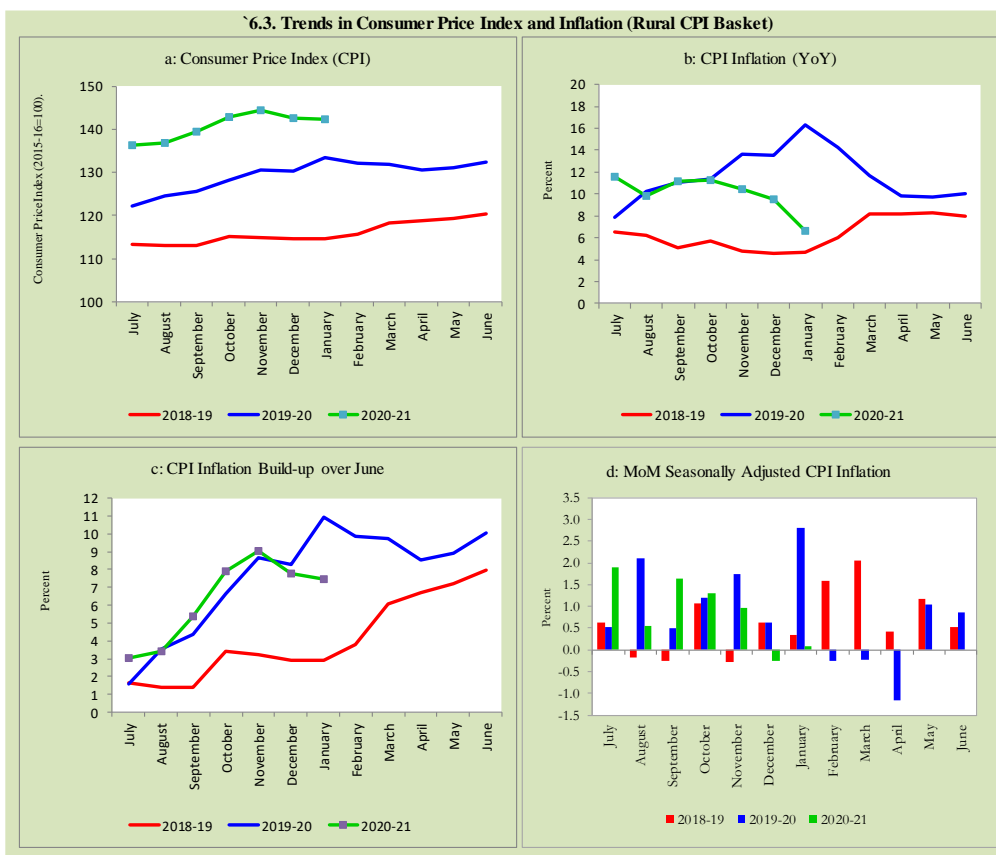
6.1. Trends in Consumer Price Index and Inflation (National CPI)



6.2. Trends in Consumer Price Index and Inflation (Urban CPI Basket)



6.3. Trends in Consumer Price Index and Inflation (Rural CPI Basket)



7. Weighted Contribution

The weighted contribution of food group in the overall urban CPI inflation decreased to 53.2 percent during January 2021 from 65.5 percent in previous month. It was 50.5 percent during corresponding month of last year. The weighted contribution of non-food group increased to 46.9 percent in January 2021 from 34.5 percent in previous month. Non-food group was 49.6 percent during corresponding month of last year. Table 7.1 provide the historical perspective of weighted contribution of food group and non-food group and their respective sub-indexes (Perishable food, Non-Perishable food, Energy, Core Inflation (NFNE), NFNE excluding HRI and HRI) in

the overall inflation for urban basket. Figure 7.1 provides a graphical presentation of composition of YoY urban CPI inflation cascaded in food group and non-food groups and their respective sub-indexes.

Table 7.1 Weighted Contribution (in percent) to Urban CPI Inflation (YoY)

Period	Overall CPI	Food Group			Non-Food Group				
		Food	Perishable food	Non-Perishable food	Non-food	Energy	Core Inflation (NFNE)	NFNE excl HRI	HRI
		a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h
Jan-20	100	50.5	18.4	32.1	49.6	16.8	32.8	24.3	8.5
Feb-20	100	47.7	9.4	38.3	52.3	13.3	39.0	29.0	10.1
Mar-20	100	49.4	6.5	42.8	50.7	7.2	43.4	31.5	11.9
Apr-20	100	48.3	5.8	42.5	51.7	5.9	45.8	35.0	10.8
May-20	100	52.2	1.0	51.1	47.8	0.7	47.1	35.8	11.4
Jun-20	100	60.0	2.6	57.4	40.0	-6.5	46.4	35.7	10.8
Jul-20	100	68.0	12.3	55.7	32.1	-4.7	36.7	26.0	10.7
Aug-20	100	56.8	2.6	54.2	43.2	1.2	42.0	30.5	11.6
Sep-20	100	58.8	9.1	49.7	41.2	2.8	38.4	27.8	10.7
Oct-20	100	68.7	5.5	63.2	31.3	-8.9	40.2	28.1	12.0
Nov-20	100	68.7	4.3	64.3	31.3	-11.0	42.4	29.8	12.6
Dec-20	100	65.5	0.3	65.2	34.5	-8.1	42.6	30.0	12.6
Jan-21	100	53.2	-20.1	73.2	46.9	-9.6	56.5	38.7	17.8

Note: The weighted contribution of sub-indexes may not exactly tally with the weighted contribution of overall CPI index due to rounding off

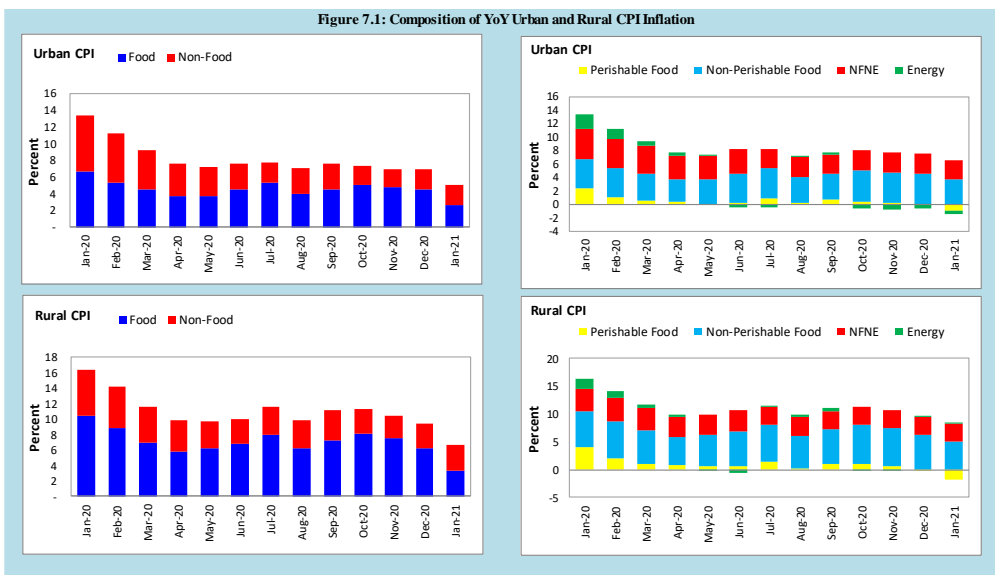
For rural basket, the weighted contribution of food group in the overall rural CPI inflation also decreased to 51.3 percent during January 2021 from 65.5 percent in previous month. It was 64.1 percent during corresponding month of last year. The weighted contribution of non-food group increased to 48.9 percent in January 2021 from 34.5 percent in previous month. Non-food group was 35.8 percent during corresponding month of last year. Table 7.2 provide the historical perspective of weighted contribution of food group (Perishable food, Non-Perishable food) and non-food group (Energy, Core Inflation (NFNE), NFNE excluding HRI and HRI) in the overall inflation for rural basket. Figure 7.1 provides a graphical display of composition of YoY rural CPI inflation distributed in food group and non-food groups and their respective sub-indexes.

Table 7.2 Weighted Contribution (in percent) to Rural CPI Inflation (YoY)

Period	Overall CPI	Food Group			Non-Food Group				
		Food	Perishable food	Non-Perishable food	Non-food	Energy	Core Inflation (NFNE)	NFNE excl HRI	HRI
		a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h
Jan-20	100	64.1	24.9	39.2	35.8	11.4	24.3	20.8	3.5
Feb-20	100	61.7	14.6	47.1	38.2	9.3	28.9	24.9	4.0
Mar-20	100	59.9	9.5	50.4	40.2	5.5	34.7	29.9	4.8
Apr-20	100	58.8	8.2	50.6	41.2	3.8	37.5	32.8	4.7
May-20	100	63.8	7.0	56.9	36.2	-1.6	37.8	33.0	4.7
Jun-20	100	68.2	6.3	61.9	31.8	-6.2	38.0	33.4	4.5
Jul-20	100	69.3	12.9	56.4	30.7	1.4	29.3	25.5	3.8
Aug-20	100	62.4	2.3	60.1	37.6	4.2	33.4	29.0	4.4
Sep-20	100	65.2	9.7	55.5	34.8	5.0	29.9	26.0	3.8
Oct-20	100	72.2	8.8	63.4	27.8	-0.8	28.4	24.7	3.9
Nov-20	100	72.2	5.7	66.5	27.8	-1.8	29.5	25.4	4.1
Dec-20	100	65.5	-1.2	66.7	34.5	0.7	33.8	29.2	4.6
Jan-21	100	51.3	-26.7	78.0	48.9	0.3	48.7	41.3	7.4

Note: The weighted contribution of sub-indexes may not exactly tally with the weighted contribution of overall CPI index due to rounding off

Figure 7.1: Composition of YoY Urban and Rural CPI Inflation



8. Inflation Diffusion Index

Inflation diffusion index (IDI) is the difference (MoM change) between the share of items with increasing prices (i.e. depicting inflation) and the share of items with falling prices (i.e. depicting deflation) in CPI basket for which prices have reported. IDI for urban and rural baskets (CPI, Core and twelve groups) is presented in Table 8.1(a & b) for the last thirteen months.

Table 8.1(a) Inflation Diffusion Index for Urban CPI Basket - based on MoM change													
	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
General	56.2	52.5	45.8	19.9	30.1	41.0	55.3	55.3	63.2	57.0	50.8	41.9	53.4
Food & Non-Alcoholic Beverages	66.7	35.6	31.1	26.7	4.4	34.4	42.2	22.2	62.2	51.1	28.9	-1.1	44.4
Alcoholic Beverages & Tobacco	100.0	66.7	66.7	100.0	66.7	66.7	66.7	100.0	66.7	33.3	66.7	-33.3	33.3
Clothing & Footwear	75.0	75.0	67.5	10.0	67.5	57.5	67.5	65.0	72.5	75.0	75.0	72.5	65.0
Housing, Water, Elect, Gas & other Fuels	3.4	6.9	27.6	24.1	17.2	10.3	27.6	41.4	6.9	6.9	6.9	51.7	6.9
Furnishing & Household Equip. Maintenance etc.	71.4	92.9	64.3	19.0	61.9	90.5	81.0	95.2	88.1	85.7	85.7	81.0	92.9
Health	71.0	77.4	67.7	35.5	38.7	38.7	74.2	83.9	77.4	64.5	67.7	54.8	71.0
Transport	40.6	50.0	31.3	-6.3	15.6	3.1	46.9	50.0	40.6	40.6	31.3	40.6	43.8
Communication	20.0	20.0	20.0	0.0	20.0	-20.0	20.0	0.0	20.0	40.0	40.0	20.0	40.0
Recreation & Culture	20.0	28.0	20.0	12.0	20.0	24.0	60.0	52.0	68.0	48.0	64.0	48.0	32.0
Education	6.3	0.0	31.3	0.0	0.0	0.0	0.0	18.8	68.8	43.8	12.5	0.0	18.8
Restaurant & Hotels	71.4	85.7	64.3	14.3	57.1	71.4	64.3	78.6	78.6	85.7	85.7	78.6	71.4
Miscellaneous	82.8	75.9	69.0	37.9	41.4	72.4	86.2	93.1	75.9	75.9	75.9	65.5	79.3
NFNE	55.3	62.6	53.2	19.6	40.4	43.8	60.9	66.4	68.5	63.8	62.6	55.3	59.1

Table 8.1(b) Inflation Diffusion Index (CPI Rural Basket) - based on MoM change

	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
General	56.6	48.0	41.8	23.4	32.4	28.7	60.7	49.2	55.3	58.2	37.7	34.8	39.3
Food & Non-Alcoholic Beverages	67.1	32.9	16.5	25.3	8.9	17.7	48.1	15.2	51.9	54.4	10.1	1.3	29.1
Alcoholic Beverages & Tobacco	60.0	100.0	60.0	60.0	20.0	60.0	100.0	100.0	80.0	60.0	20.0	20.0	40.0
Clothing & Footwear	77.8	85.2	70.4	0.0	85.2	48.1	85.2	66.7	59.3	66.7	85.2	77.8	59.3
Housing, Water, Elect, Gas & other Fuels	8.7	0.0	39.1	34.8	17.4	0.0	52.2	65.2	26.1	26.1	17.4	39.1	30.4
Furnishing & Household Equip. Maintenance etc.	69.2	73.1	80.8	23.1	53.8	65.4	88.5	88.5	69.2	84.6	42.3	69.2	46.2
Health	42.9	42.9	71.4	42.9	50.0	35.7	57.1	50.0	85.7	42.9	64.3	42.9	57.1
Transport	43.8	43.8	12.5	-6.3	0.0	18.8	43.8	62.5	31.3	43.8	18.8	37.5	31.3
Communication	20.0	20.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	20.0	40.0	0.0	0.0
Recreation & Culture	22.2	33.3	27.8	22.2	11.1	5.6	44.4	33.3	61.1	72.2	33.3	44.4	22.2
Education	0.0	80.0	40.0	0.0	0.0	0.0	0.0	0.0	60.0	100.0	0.0	0.0	20.0
Restaurant & Hotels	78.6	71.4	78.6	28.6	64.3	57.1	64.3	57.1	50.0	71.4	78.6	64.3	42.9
Miscellaneous	70.6	82.4	52.9	41.2	70.6	35.3	88.2	88.2	82.4	76.5	82.4	35.3	76.5
NFNE	44.9	52.2	58.1	55.9	24.3	50.0	36.0	66.2	62.5	64.0	64.7	55.9	47.1

See annexure B (Technical Notes) for the methodology of Inflation Diffusion Index.

9. Domestic Commodity Prices

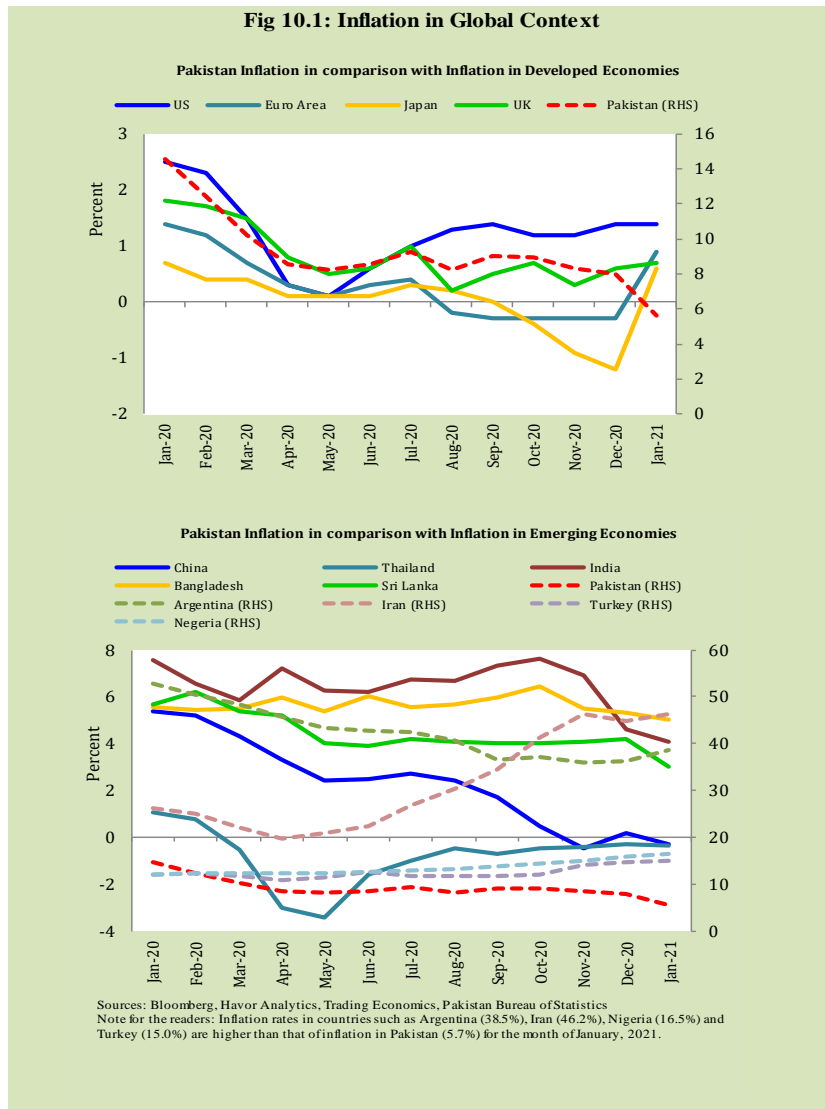
Inflation in domestic food commodities (YoY and MoM in percent) for selected essential food items covering both urban and rural CPI baskets is given in table 9.1.

Table 9.1 Inflation in Domestic Urban and Rural CPI Food Commodities (in percent) - January 2021						
S. No	Item	Unit	Urban CPI		Rural CPI	
			YoY	MoM	YoY	MoM
1	Wheat	10 Kg	19.2	8.2	24.4	5.9
2	Wheat Flour Bag	20 Kg	2.9	0.6	11.2	3.3
3	Rice Basmati Broken (Superior/Average Quality)*	1 Kg	1.4	0.1	12.3	0.3
4	Beef with Bone (Average Quality)	1 Kg	9.6	0.0	9.7	0.1
5	Mutton (Average Quality)	1 Kg	10.4	0.4	11.1	0.9
6	Chicken Farm Broiler (Live)	1 Kg	1.8	-28.5	2.3	-26.5
7	Milk Fresh (Un-Boiled)	1 Litre	14.2	2.6	7.7	0.1
8	Eggs Farm	Dozen	21.7	-15.4	32.9	-9.3
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	23.4	8.0	16.8	6.7
10	Pulse Masoor (Washed)	1 Kg	7.3	0.3	12.5	-0.4
11	Pulse Moong (Washed)	1 Kg	4.9	2.0	4.2	2.7
12	Pulse Mash (Washed)	1 Kg	10.0	1.2	14.4	1.8
13	Pulse Gram	1 Kg	-11.9	-0.1	-8.8	1.2
14	Potatoes	1 Kg	-5.2	-34.3	-8.4	-36.5
15	Onions	1 Kg	-30.4	-24.9	-32.6	-26.0
16	Tomatoes	1 Kg	-32.2	-30.0	-36.2	-32.8
17	Sugar Refined	1 Kg	25.9	14.8	23.5	14.3
18	Garlic (Lehsun)	1 Kg	-10.3	-0.2	-19.9	4.3
19	Ginger (Adrak)	500 Gm	14.8	-54.8	30.9	-46.7
20	Tea Lipton Yellow Label 190 Gm Packet	Each	0.1	0.0	0.2	0.0

*Superior Quality for Urban CPI Basket and Average Quality for Rural CPI Basket

10. Inflation in Global Context

In global context, Pakistan’s inflation in comparison with inflation in selected developed and emerging economies is given in figure 10.1.

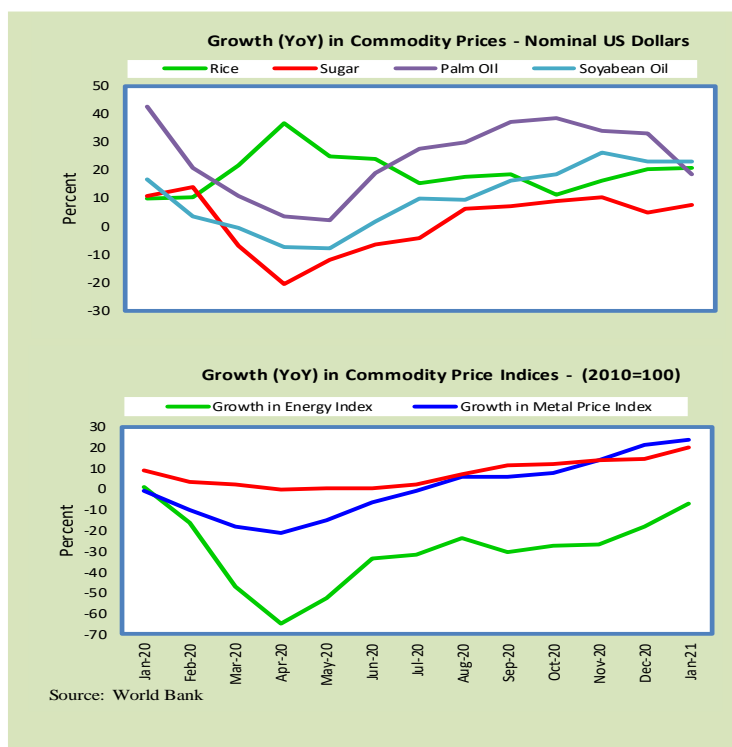


11. Global Commodity Prices

Global commodity prices and various group indexes have a relation with domestic inflation. In this context, changes in major global commodity prices and indexes along with price trends are given in table 11.1 and figure 11.1.

Table 11.1 Changes in Major Global Indices (percent)

Item/ Group	Jan-20		Dec-20		Jan-21	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	8.6	2.5	14.8	3.4	19.8	7.0
Metals	-0.9	-0.3	21.5	7.2	23.9	1.7
Energy	0.9	-3.2	-18.2	15.2	-7.0	10.0
Agricultural	6.5	1.9	11.5	2.9	14.9	5.0
Cotton	-4.0	4.3	6.8	4.2	10.3	7.7



12. Seasonal Adjustment in CPI

Seasonal adjustment is the process of estimating and removing the seasonal effects from a time series after decomposing it into seasonal, trend, cycle and irregular components. The purpose is to identify the different components of the time series and thus provide a better understanding of its underlying behavior. Seasonally adjusted changes are usually preferred for analyzing general price trends in the economy because these eliminate the effect of changes that normally occur at the same time and in about the same magnitude every year. Various statistical methods can be used to decompose a time series into its constituent components. The State Bank of Pakistan uses X-12-ARIMA Seasonal Adjustment Method for this purpose.

The changes in consumer prices are normally reported in terms of year-on-year and month-on-month basis. Seasonal adjustment is particularly useful for analyzing month-on-month changes. The monthly data series of Consumer Price Indices (National CPI, Urban CPI and Rural CPI) from July 2008 to January 2021 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

Figure 12.1 reveals that seasonality in all CPI series has been increasing over the period. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to December and downward seasonality in the remaining months of the year. Upward and downward seasonality is above and below the trend line respectively. It is important to note that seasonal factors are estimate on historical data and that the future data may not necessarily show the same seasonal pattern.

Fig. 12.1 (a) Seasonal Factors of National CPI

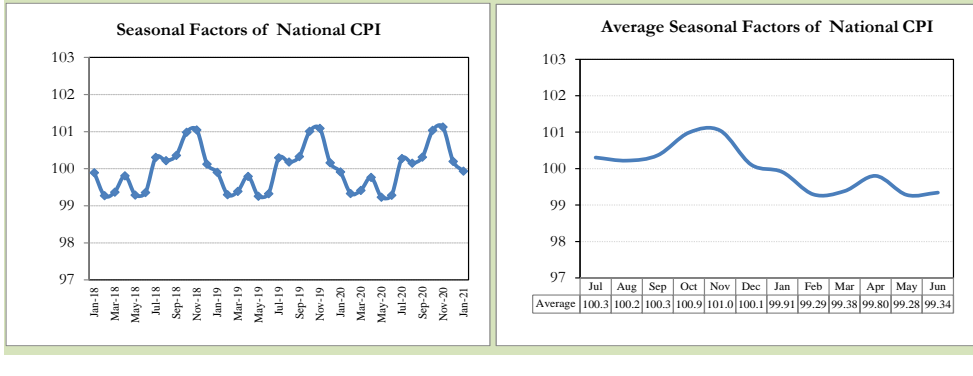


Fig. 12.1 (b) Seasonal Factors of Urban CPI

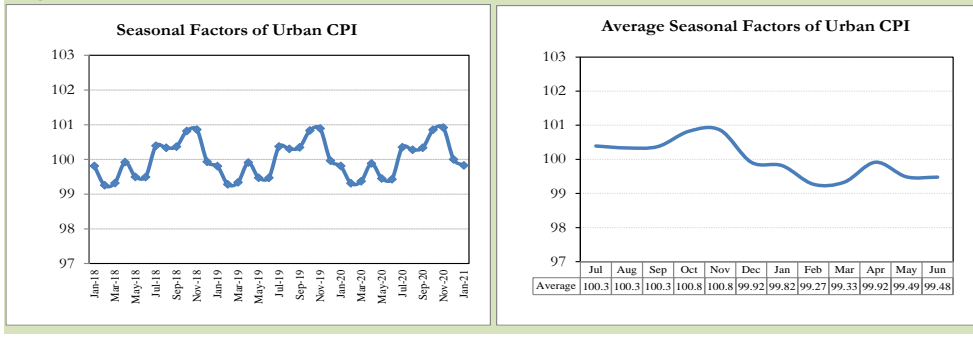
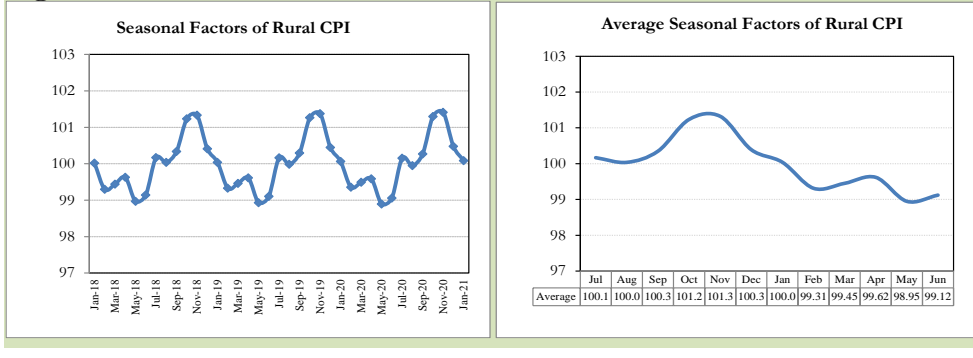


Fig. 12.1 (c) Seasonal Factors of Rural CPI



Figures 12.2 show that seasonally adjusted series are relatively smoother than the original series due to the removal of the seasonal variations. The trend follows the long-term movement in original series, and is smoother than the original series because some irregular fluctuations have been removed.

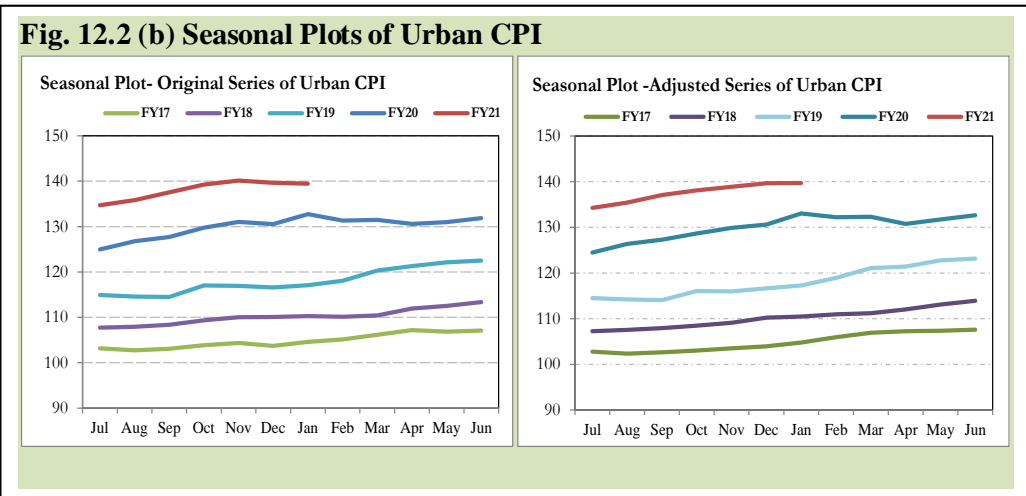
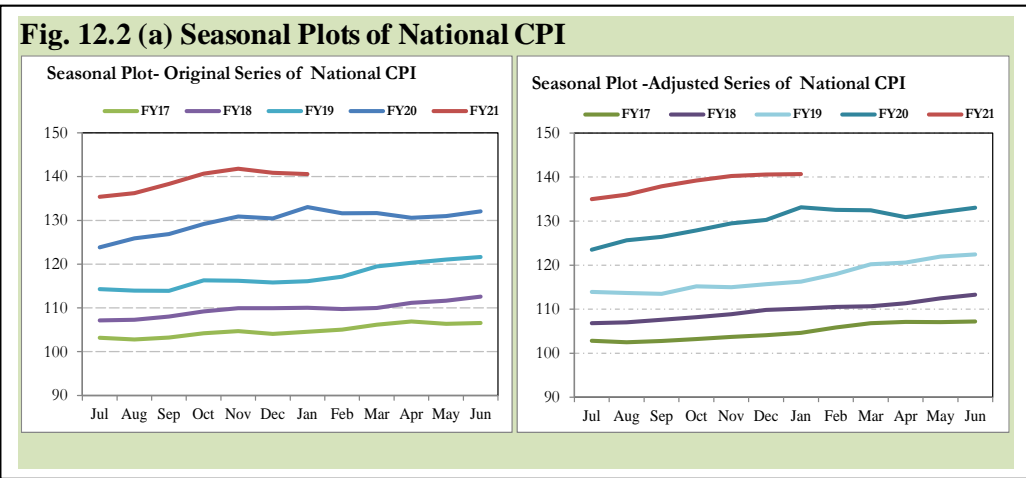
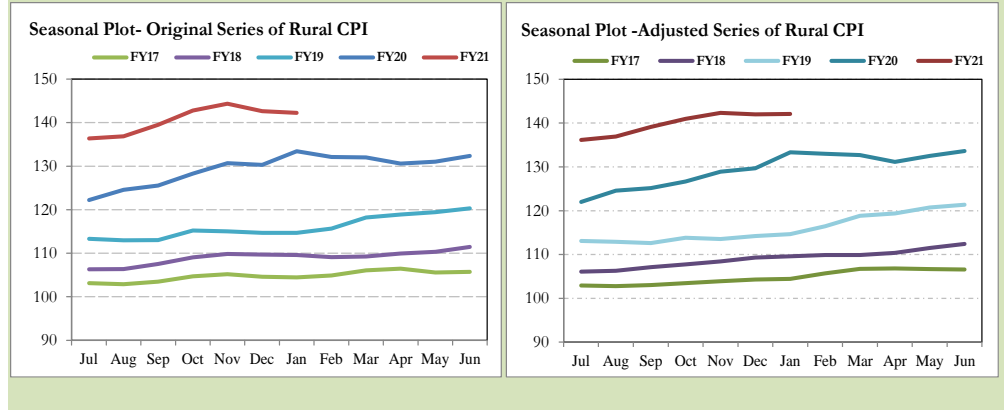


Fig. 12.2 (c) Seasonal Plots of Rural CPI



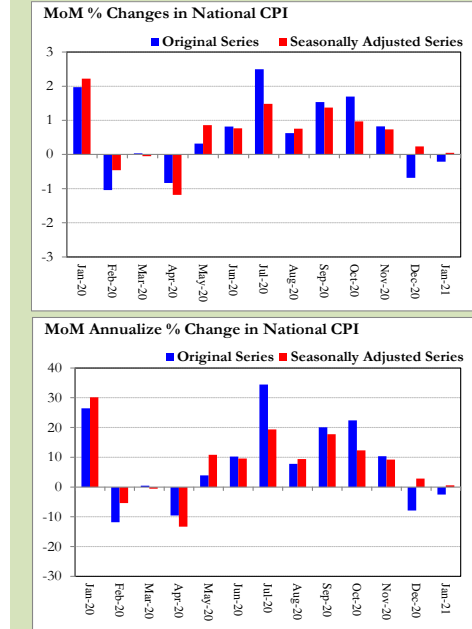
Seasonally adjusted National CPI for January 2021 stood at 140.65 against 140.56 in original series showing an increase of 0.09 on account of adjustment of downward seasonality in January 2021.

Seasonally adjusted Urban CPI for January 2021 stood at 139.69 against 139.45 in original series showing an increase of 0.24 on account of adjustment of downward seasonality in January 2021.

Seasonally adjusted Rural CPI for January 2021 stood at 142.11 against 142.23 in original series showing a decrease of 0.12 on account of adjustment of downward seasonality in January 2021.

Month-on-month change of seasonally adjusted National CPI series stood at 0.05% reflecting an increase during January 2021 over previous month and a

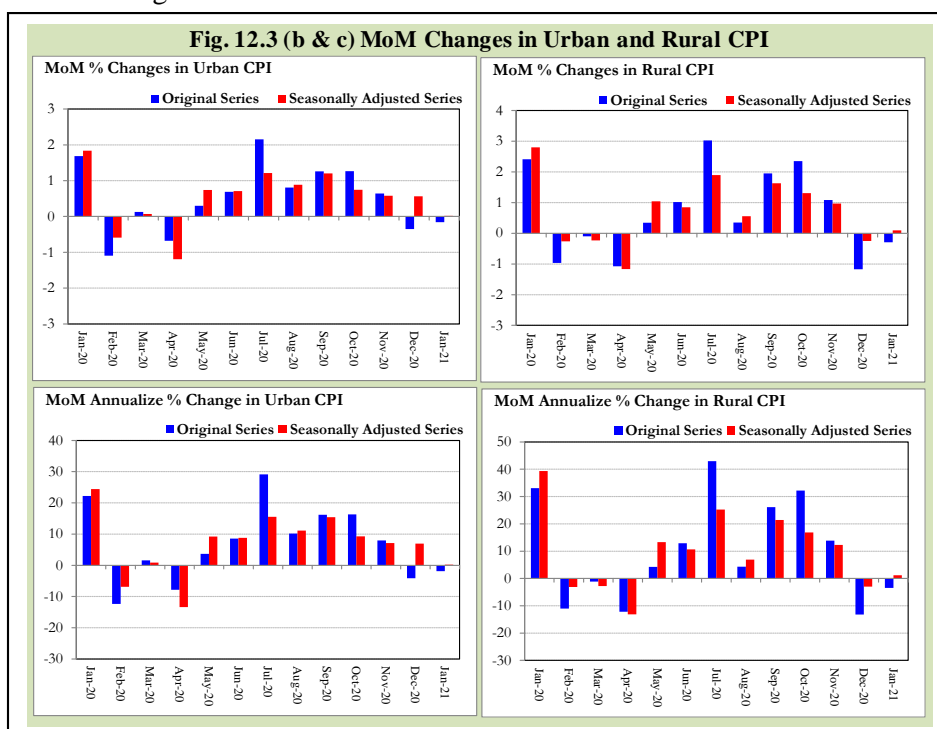
Fig. 12.3 (a) MoM Changes in National CPI



decrease of 0.21% in original series.

Month-on-month change of seasonally adjusted Urban CPI series stood at 0.02% reflecting an increase during January 2021 over previous month and a decrease of 0.16% in original series.

Month-on-month change of seasonally adjusted Rural CPI series stood at 0.10% reflecting a decrease during January 2021 over previous month and a decrease of 0.29% in original series.



It is pertinent to note that in case of MoM inflation, seasonally adjusted rates provide important information. The most recent annual rate of inflation is usually indicated by annualizing the seasonally adjusted month-on-month rate. Annualized rate of National CPI inflation in January 2021 (corresponding to the seasonally adjusted month-on-month rate) is 0.59 percent.

Annexure A

Table A1: National CPI Inflation by Groups (YoY and MoM in percent)							
	Weights	MoM change			YoY change		
		Jan-20	Dec-20	Jan-21	Jan-20	Dec-20	Jan-21
Food & Non-Alcoholic Beverages	34.6	3.4	-3.2	-2.7	23.7	13.3	6.7
Alcoholic Beverages & Tobacco	1.0	0.3	0.2	0.1	17.9	6.0	5.8
Clothing & Footwear	8.6	0.9	0.7	0.8	9.6	9.6	9.5
Housing, Water, Elec, Gas & other Fuels	23.6	1.9	1.2	1.9	9.6	3.4	3.4
Furnishing & Household Equip. Maintenance	4.1	0.4	0.5	0.4	10.1	7.7	7.6
Health	2.8	0.6	0.9	0.9	11.8	8.1	8.5
Transport	5.9	0.9	1.6	1.9	18.6	-3.5	-2.6
Communication	2.2	0.0	0.0	0.0	4.0	0.5	0.5
Recreation & Culture	1.6	0.1	0.4	0.3	6.5	4.4	4.6
Education	3.8	0.0	0.0	0.1	7.3	1.2	1.3
Restaurants & Hotels	6.9	1.5	0.6	0.6	7.4	9.9	8.9
Miscellaneous	4.9	1.4	0.2	1.0	11.4	11.9	11.5
Overall National CPI	100.0	2.0	-0.7	-0.2	14.6	8.0	5.7

Table A2: Urban CPI Inflation by Groups (YoY and MoM in percent)							
	Weights	MoM change			YoY change		
		Jan-20	Dec-20	Jan-21	Jan-20	Dec-20	Jan-21
I. Food Group	36.8	2.7	-2.1	-2.1	19.5	12.6	7.3
Food & Non-Alcoholic Beverages	30.4	3.1	-2.6	-2.7	22.0	13.1	6.7
Alcoholic Beverages & Tobacco	0.9	0.4	0.0	0.0	16.8	6.6	6.2
Restaurant & Hotels (Food Component)	5.5	0.7	0.9	0.9	6.9	10.6	10.8
II. Non-Food Group	63.2	1.1	0.7	1.1	10.2	3.8	3.7
Clothing & Footwear	8.0	0.8	0.5	0.5	9.0	8.8	8.5
Housing, Water, Elec, Gas & other Fuels	27.0	1.5	0.9	1.6	9.7	2.8	2.9
Furnishing & Household Equip. Maintenance	4.1	0.2	0.5	0.5	10.4	6.1	6.4
Health	2.3	0.6	0.9	0.6	11.5	7.4	7.4
Transport	6.1	0.9	1.9	1.8	19.4	-3.6	-2.8
Communication	2.4	0.0	0.1	0.1	5.3	0.6	0.6
Recreation & Culture	1.7	0.0	0.2	0.1	6.1	3.3	3.3
Education	4.9	0.0	0.0	0.1	7.5	1.0	1.1
Restaurants & Hotels (Non-food Component)	1.9	5.2	0.1	0.0	5.3	8.1	2.8
Miscellaneous	4.8	1.2	0.4	1.0	10.7	10.6	10.4
Overall Urban CPI	100.0	1.7	-0.3	-0.2	13.4	7.0	5.0

Table A3: Rural CPI Inflation by Groups (YoY and MoM in percent)

	Weights	MoM change			YoY change		
		Jan-20	Dec-20	Jan-21	Jan-20	Dec-20	Jan-21
I. Food Group	45.9	3.4	-3.4	-2.2	23.8	13.4	7.2
Food & Non-Alcoholic Beverages	40.9	3.8	-3.9	-2.6	25.5	13.5	6.6
Alcoholic Beverages & Tobacco	1.3	0.2	0.4	0.2	19.2	5.4	5.3
Restaurant & Hotels (Food Component)	3.8	1.1	0.8	0.9	8.7	14.6	14.4
II. Non-Food Group	54.1	1.5	1.0	1.5	10.5	6.1	6.1
Clothing & Footwear	9.5	1.1	0.9	1.2	10.2	10.6	10.7
Housing, Water, Elec, Gas & other Fuels	18.5	2.8	1.7	2.5	9.4	4.9	4.5
Furnishing & Household Equip. Maintenance etc.	4.1	0.8	0.6	0.4	9.7	10.0	9.5
Health	3.5	0.6	0.9	1.3	12.1	8.8	9.6
Transport	5.6	0.9	1.2	2.0	17.2	-3.3	-2.2
Communication	2.0	0.0	0.0	0.0	1.7	0.4	0.4
Recreation & Culture	1.4	0.3	0.8	0.7	7.3	6.6	7.0
Education	2.1	0.0	0.0	0.1	6.7	2.0	2.1
Restaurants & Hotels (Non-food Component)	2.4	0.6	0.0	0.0	9.2	1.4	0.8
Miscellaneous	5.0	1.5	-0.1	1.0	12.5	13.8	13.2
Overall Rural CPI	100.0	2.4	-1.2	-0.3	16.4	9.5	6.6

Table A4: Top Ten Contributors to Urban CPI Inflation (YoY) in January 2021					
Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Jan-20	Jan-21		
A. Ranked by Weighted Contribution					
1	Milk Fresh	7.11	8.45	14.21	18.21
2	House Rent	19.26	5.63	4.77	17.81
3	Readymade Food	5.52	6.92	10.80	11.24
4	Condiments And Spices	1.33	24.43	27.22	8.45
5	Cotton Cloth	2.22	12.81	12.59	5.32
6	Sugar	1.11	26.29	25.95	5.14
7	Vegetable Ghee	1.03	17.56	21.70	4.49
8	Meat	2.04	13.43	9.96	4.32
9	Appliances/Articles/Products For P	2.98	8.76	7.51	4.22
10	Personal Effects N.E.C.	0.94	18.70	17.57	4.17
Total		43.55			83.38
B. Ranked by Percentage Change					
1	Condiments And Spices	1.33	24.43	27.22	8.45
2	Sugar	1.11	26.29	25.95	5.14
3	Wheat Products	0.09	18.62	24.53	0.43
4	Mustard Oil	0.01	10.99	23.25	0.05
5	Eggs	0.51	18.05	21.70	2.58
6	Vegetable Ghee	1.03	17.56	21.70	4.49
7	Butter	0.09	38.41	21.40	0.47
8	Beans	0.04	20.56	20.06	0.16
9	Water Supply	0.53	10.46	20.01	2.08
10	Wheat	0.61	36.13	19.24	2.50
Total		5.37			26.34
C. Ranked by Weights					
1	House Rent	19.26	5.63	4.77	17.81
2	Milk Fresh	7.11	8.45	14.21	18.21
3	Readymade Food	5.52	6.92	10.80	11.24
4	Education	4.88	7.48	1.06	1.13
5	Electricity Charges	4.56	13.99	-4.38	-3.73
6	Wheat Flour	3.01	24.06	7.23	4.15
7	Appliances/Articles/Products For P	2.98	8.76	7.51	4.22
8	Motor Fuel	2.91	25.69	-6.62	-4.66
9	Cotton Cloth	2.22	12.81	12.59	5.32
10	Meat	2.04	13.43	9.96	4.32
Total		54.48			58.01
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in Urban CPI, which is 5.0 percent in January 2021.					

Table A5: Top Ten Contributors to Urban CPI Inflation (MoM) in January 2021					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
A. Ranked by Weighted Contribution					
1	Chicken	1.36	1.21	-28.48	292.01
2	Potatoes	0.45	-13.12	-33.57	177.37
3	Tomatoes	0.35	-27.12	-30.03	114.82
4	Fresh Vegetables	1.53	-19.18	-10.14	102.55
5	Condiments And Spices	1.33	6.88	-7.54	97.87
6	Onions	0.59	-29.12	-24.87	86.23
7	Eggs	0.51	15.67	-15.39	79.94
8	Transport Services	1.75	5.07	-1.74	17.63
9	Electricity Charges	4.56	5.96	-0.53	13.25
10	Pulse Gram	0.17	-1.23	-0.15	0.14
					12.59
					981.81
B. Ranked by Percentage Change					
1	Sugar	1.11	-18.07	14.76	-97.39
2	Liquefied Hydrocarbons	0.51	0.24	13.86	-45.85
3	Mustard Oil	0.01	0.28	10.18	-0.74
4	Wheat	0.61	-4.00	8.17	-35.50
5	Vegetable Ghee	1.03	3.07	6.06	-43.74
6	Fresh Fruits	1.44	-1.85	5.39	-36.23
7	Motor Fuel	2.91	0.68	4.33	-82.90
8	Cooking Oil	1.10	2.20	3.28	-24.03
9	Postal Services	0.02	0.00	3.05	-0.39
10	Milk Fresh	7.11	0.36	2.46	-106.61
					15.85
					-473.37
C. Ranked by Weights					
1	House Rent	19.26	0.00	1.97	-229.32
2	Milk Fresh	7.11	0.36	2.46	-106.61
3	Readymade Food	5.52	0.88	0.89	-30.88
4	Education	4.88	0.00	0.06	-2.00
5	Electricity Charges	4.56	5.96	-0.53	13.25
6	Wheat Flour	3.01	-0.10	1.54	-28.30
7	Appliances/Articles/Products For P	2.98	0.81	0.57	-10.43
8	Motor Fuel	2.91	0.68	4.33	-82.90
9	Cotton Cloth	2.22	0.06	0.44	-6.26
10	Meat	2.04	0.45	0.13	-1.86
					54.48
					-485.30
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Urban CPI, which is -0.2 percent in January 2021.					

Table A6: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY) in January 2021					
Top 15 Contributors					
Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Jan-20	Jan-21		
Ranked by Weighted Contribution					
1	Milk Fresh	7.11	8.45	14.21	18.21
2	House Rent	19.26	5.63	4.77	17.81
3	Readymade Food	5.52	6.92	10.80	11.24
4	Condiments And Spices	1.33	24.43	27.22	8.45
5	Cotton Cloth	2.22	12.81	12.59	5.32
6	Sugar	1.11	26.29	25.95	5.14
7	Vegetable Ghee	1.03	17.56	21.70	4.49
8	Meat	2.04	13.43	9.96	4.32
9	Appliances/Articles/Products For P	2.98	8.76	7.51	4.22
10	Personal Effects N.E.C.	0.94	18.70	17.57	4.17
11	Wheat Flour	3.01	24.06	7.23	4.15
12	Cooking Oil	1.10	15.44	13.69	3.00
13	Eggs	0.51	18.05	21.70	2.58
14	Wheat	0.61	36.13	19.24	2.50
15	Water Supply	0.53	10.46	20.01	2.08
Total		49.31			97.69
Bottom 15 Contributors					
1	Fresh Vegetables	1.53	93.60	-26.03	-10.53
2	Motor Fuel	2.91	25.69	-6.62	-4.66
3	Tomatoes	0.35	157.72	-32.16	-4.18
4	Onions	0.59	125.32	-30.41	-3.75
5	Electricity Charges	4.56	13.99	-4.38	-3.73
6	Liquefied Hydrocarbons	0.51	14.06	-12.05	-1.70
7	Fresh Fruits	1.44	8.47	-6.20	-1.54
8	Transport Services	1.75	11.64	-1.79	-0.60
9	Fish	0.39	11.90	-7.67	-0.57
10	Potatoes	0.45	87.30	-4.59	-0.56
11	Pulse Gram	0.17	27.31	-11.95	-0.39
12	Besan	0.08	22.94	-5.71	-0.09
13	Gram Whole	0.09	7.62	-3.66	-0.06
14	Newspapers	0.07	3.88	0.00	0.00
15	Motor Vehicle Tax	0.05	2.19	0.00	0.00
Total		14.92			-32.36

Table A7: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM) in January 2021					
Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Chicken	1.36	1.21	-28.48	292.01
2	Potatoes	0.45	-13.12	-33.57	177.37
3	Tomatoes	0.35	-27.12	-30.03	114.82
4	Fresh Vegetables	1.53	-19.18	-10.14	102.55
5	Condiments And Spices	1.33	6.88	-7.54	97.87
6	Onions	0.59	-29.12	-24.87	86.23
7	Eggs	0.51	15.67	-15.39	79.94
8	Transport Services	1.75	5.07	-1.74	17.63
9	Electricity Charges	4.56	5.96	-0.53	13.25
10	Pulse Gram	0.17	-1.23	-0.15	0.14
11	Beans	0.04	-0.28	-0.06	0.02
12	Cigarettes	0.72	-0.17	0.00	0.00
13	Communication Services	1.88	0.00	0.00	0.00
14	Accommodation Services	0.13	0.00	0.00	0.00
15	Ice Cream	0.10	0.00	0.00	0.00
Total		15.47			981.83
Bottom 15 Contributors					
1	House Rent	19.26	0.00	1.97	-229.32
2	Milk Fresh	7.11	0.36	2.46	-106.61
3	Sugar	1.11	-18.07	14.76	-97.39
4	Motor Fuel	2.91	0.68	4.33	-82.90
5	Liquefied Hydrocarbons	0.51	0.24	13.86	-45.85
6	Vegetable Ghee	1.03	3.07	6.06	-43.74
7	Fresh Fruits	1.44	-1.85	5.39	-36.23
8	Wheat	0.61	-4.00	8.17	-35.50
9	Readymade Food	5.52	0.88	0.89	-30.88
10	Wheat Flour	3.01	-0.10	1.54	-28.30
11	Cooking Oil	1.10	2.20	3.28	-24.03
12	Personal Effects N.E.C.	0.94	-0.66	1.74	-14.51
13	Appliances/Articles/Products For P	2.98	0.81	0.57	-10.43
14	Footwear	1.48	0.03	1.15	-10.03
15	Milk Products	0.64	0.09	2.23	-8.91
Total		49.65			-804.64

Table A8: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation in January 2021					
Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Chicken	1.36	1.21	-28.48	292.01
2	Potatoes	0.45	-13.12	-33.57	177.37
3	Tomatoes	0.35	-27.12	-30.03	114.82
4	Fresh Vegetables	1.53	-19.18	-10.14	102.55
5	Condiments And Spices	1.33	6.88	-7.54	97.87
6	Onions	0.59	-29.12	-24.87	86.23
7	Eggs	0.51	15.67	-15.39	79.94
8	Pulse Gram	0.17	-1.23	-0.15	0.14
9	Beans	0.04	-0.28	-0.06	0.02
10	Cigarettes	0.72	-0.17	0.00	0.00
11	Ice Cream	0.10	0.00	0.00	0.00
12	Beverages	0.89	0.02	0.00	0.00
13	Honey	0.10	0.49	0.00	0.00
14	Marriage Hall Charges	1.75	0.12	0.00	0.00
15	Dessert Preparation	0.04	0.26	0.10	-0.02
Total		9.94			950.92
Bottom 15 Contributors					
1	Milk Fresh	7.11	0.36	2.46	-106.61
2	Sugar	1.11	-18.07	14.76	-97.39
3	Vegetable Ghee	1.03	3.07	6.06	-43.74
4	Fresh Fruits	1.44	-1.85	5.39	-36.23
5	Wheat	0.61	-4.00	8.17	-35.50
6	Readymade Food	5.52	0.88	0.89	-30.88
7	Wheat Flour	3.01	-0.10	1.54	-28.30
8	Cooking Oil	1.10	2.20	3.28	-24.03
9	Milk Products	0.64	0.09	2.23	-8.91
10	Fish	0.39	1.51	1.64	-3.35
11	Dry Fruits	0.33	4.57	1.32	-2.83
12	Pulse Moong	0.17	-0.57	2.02	-2.25
13	Meat	2.04	0.45	0.13	-1.86
14	Rice	1.18	-0.14	0.20	-1.50
15	Nimco	0.12	0.66	1.38	-1.03
Total		25.80			-424.41

Table A9: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-food Inflation in January 2021

Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Transport Services	1.75	5.07	-1.74	17.63
2	Electricity Charges	4.56	5.96	-0.53	13.25
3	Communication Services	1.88	0.00	0.00	0.00
4	Gas Charges	1.08	0.00	0.00	0.00
5	Newspapers	0.07	0.00	0.00	0.00
6	Motor Vehicle Tax	0.05	0.00	0.00	0.00
7	Appliances/Articles/Products For P	0.00	0.00	0.00	0.00
8	Personal Effects N.E.C.	0.00	0.00	0.00	0.00
9	Accommodation Services	0.05	0.01	0.00	0.00
10	Water Supply	0.53	0.78	0.00	0.00
11	Therapeutic Appliances And	0.01	0.03	0.16	0.00
12	Plastic Products	0.05	0.45	0.02	-0.01
13	Carpets	0.03	0.11	0.12	-0.02
14	Construction Wage Rates	0.20	0.52	0.01	-0.02
15	Dopatta	0.17	0.49	0.02	-0.02
Total		10.42			30.81
Bottom 15 Contributors					
1	House Rent	19.26	0.00	1.97	-229.32
2	Motor Fuel	2.91	0.68	4.33	-82.90
3	Liquefied Hydrocarbons	0.51	0.24	13.86	-45.85
4	Electrical Appliances For Personal	0.94	-0.66	1.74	-14.51
5	Personal Grooming Services	2.98	0.81	0.57	-10.43
6	Footwear	1.48	0.03	1.15	-10.03
7	Cotton Cloth	2.22	0.06	0.44	-6.26
8	Drugs And Medicines	1.07	1.29	0.85	-6.05
9	Furniture And Furnishing	0.48	0.47	1.36	-4.04
10	Solid Fuel	0.42	3.33	1.32	-3.03
11	Household Equipments	1.00	0.12	0.49	-3.01
12	Readymade Garments	1.32	0.24	0.33	-2.64
13	Motor Vehicles	0.81	0.65	0.42	-2.36
14	Washing Soap/Detergents/Match Box	1.41	0.89	0.27	-2.31
15	Woolen Readymade Garments	0.43	1.08	0.79	-2.15
Total		37.25			-424.90

Table A10: Top Ten Contributors to Rural CPI Inflation (YoY) in January 2021					
Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Jan-20	Jan-21		
A. Ranked by Weighted Contribution					
1	Wheat	3.47	32.18	24.36	13.40
2	Milk Fresh	10.38	8.32	7.72	11.17
3	Readymade Food	3.80	8.72	14.40	8.26
4	Condiments And Spices	1.49	26.95	31.35	7.70
5	House Rent	8.61	6.29	5.83	7.40
6	Solid Fuel	4.48	11.89	11.42	7.39
7	Vegetable Ghee	2.38	25.30	17.27	6.99
8	Wheat Flour	3.43	25.21	13.67	6.82
9	Sugar	2.03	26.39	23.51	6.54
10	Cotton Cloth	2.84	13.03	12.55	5.79
Total		42.91			81.46
B. Ranked by Percentage Change					
1	Water Supply	0.06	30.55	35.99	0.42
2	Eggs	0.57	12.73	32.90	3.14
3	Condiments And Spices	1.49	26.95	31.35	7.70
4	Wheat	3.47	32.18	24.36	13.40
5	Sugar	2.03	26.39	23.51	6.54
6	Hosiery	0.43	14.78	21.86	1.57
7	Wheat Products	0.11	12.00	20.22	0.31
8	Doctor (Mbbs) Clinic Fee	0.51	18.35	19.33	1.74
9	Personal Effects N.E.C.	1.21	24.07	18.68	4.10
10	Mustard Oil	0.01	13.45	17.70	0.03
Total		9.90			38.96
C. Ranked by Weights					
1	Milk Fresh	10.38	8.32	7.72	11.17
2	House Rent	8.61	6.29	5.83	7.40
3	Solid Fuel	4.48	11.89	11.42	7.39
4	Readymade Food	3.80	8.72	14.40	8.26
5	Wheat	3.47	32.18	24.36	13.40
6	Electricity Charges	3.44	13.99	-4.38	-2.14
7	Wheat Flour	3.43	25.21	13.67	6.82
8	Cotton Cloth	2.84	13.03	12.55	5.79
9	Motor Fuels	2.49	26.40	-6.81	-3.10
10	Vegetable Ghee	2.38	25.30	17.27	6.99
Total		45.32			61.98
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in Rural CPI, which is 6.6 percent in January 2021.					

Table A11: Top Ten Contributors to Rural CPI Inflation (MoM) in January 2021					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
A. Ranked by Weighted Contribution					
1	Potatoes	0.74	-16.61	-36.10	182.51
2	Chicken	1.46	3.21	-26.47	157.57
3	Tomatoes	0.51	-19.82	-32.77	99.17
4	Fresh Vegetables	2.09	-18.15	-13.32	96.76
5	Onions	0.90	-31.45	-25.99	67.69
6	Condiments And Spices	1.49	4.19	-7.96	58.43
7	Eggs	0.57	14.08	-9.27	27.15
8	Transport Services	1.80	3.03	-1.06	5.86
9	Electricity Charges	3.44	5.96	-0.53	5.25
10	Rice	1.55	0.11	-0.24	1.62
					702.00
B. Ranked by Percentage Change					
1	Sugar	2.03	-23.04	14.26	-89.74
2	Liquefied Hydrocarbons	1.00	-0.74	9.31	-28.94
3	Mustard Oil	0.01	2.63	7.00	-0.32
4	Cooking Oil	0.60	3.71	6.22	-14.40
5	Wheat	3.47	-3.91	5.88	-79.56
6	Vegetable Ghee	2.38	3.13	5.62	-52.85
7	Motor Fuels	2.49	0.61	4.72	-40.07
8	Wheat Flour	3.43	-3.53	4.21	-47.93
9	Tailoring	1.30	0.38	3.86	-16.84
10	Fresh Fruits	1.45	-1.49	3.75	-13.40
					-384.04
C. Ranked by Weights					
1	Milk Fresh	10.38	0.69	0.08	-2.72
2	House Rent	8.61	0.00	2.81	-76.68
3	Solid Fuel	4.48	2.97	2.78	-40.82
4	Readymade Food	3.80	0.79	0.94	-12.76
5	Wheat	3.47	-3.91	5.88	-79.56
6	Electricity Charges	3.44	5.96	-0.53	5.25
7	Wheat Flour	3.43	-3.53	4.21	-47.93
8	Cotton Cloth	2.84	0.04	1.09	-11.76
9	Motor Fuels	2.49	0.61	4.72	-40.07
10	Vegetable Ghee	2.38	3.13	5.62	-52.85
					-359.90
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Rural CPI, which is -0.3 percent in January 2021.					

Table A12: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY) in January 2021					
<u>Top 15 Contributors</u>					
Items/ Contributors	Weights	<u>YoY Change</u>		Weighted Contribution (%)	
		Jan-20	Jan-21		
Ranked by Weighted Contribution					
1	Wheat	3.47	32.18	24.36	13.40
2	Milk Fresh	10.38	8.32	7.72	11.17
3	Readymade Food	3.80	8.72	14.40	8.26
4	Condiments And Spices	1.49	26.95	31.35	7.70
5	House Rent	8.61	6.29	5.83	7.40
6	Solid Fuel	4.48	11.89	11.42	7.39
7	Vegetable Ghee	2.38	25.30	17.27	6.99
8	Wheat Flour	3.43	25.21	13.67	6.82
9	Sugar	2.03	26.39	23.51	6.54
10	Cotton Cloth	2.84	13.03	12.55	5.79
11	Personal Effects N.E.C.	1.21	24.07	18.68	4.10
12	Rice	1.55	11.24	13.37	3.78
13	Eggs	0.57	12.73	32.90	3.14
14	Appliances/Articles/Products For	2.27	7.00	9.75	2.98
15	Personal Grooming Services	1.54	10.17	12.56	2.95
Total		50.04			98.42
<u>Bottom 15 Contributors</u>					
1	Fresh Vegetables	2.09	104.47	-32.66	-14.59
2	Tomatoes	0.51	211.18	-36.17	-5.51
3	Onions	0.90	136.63	-32.59	-4.45
4	Motor Fuels	2.49	26.40	-6.81	-3.10
5	Electricity Charges	3.44	13.99	-4.38	-2.14
6	Liquefied Hydrocarbons	1.00	12.07	-10.45	-1.89
7	Potatoes	0.74	114.03	-9.11	-1.55
8	Fresh Fruits	1.45	12.52	-6.77	-1.29
9	Pulse Gram	0.28	25.23	-8.80	-0.36
10	Gram Whole	0.11	6.86	-5.98	-0.10
11	Besan	0.07	17.79	-4.94	-0.05
12	Fish	0.26	11.17	-0.81	-0.03
13	Motor Vehicle Tax	0.02	0.00	0.00	0.00
14	Postal Services	0.01	31.47	0.00	0.00
15	Accommodation Services	0.14	0.00	0.03	0.00
Total		13.51			-35.06

Table A13: Top and Bottom Fifteen Contributors to Rural CPI Inflation (MoM) in January 2021					
Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Potatoes	0.74	-16.61	-36.10	182.51
2	Chicken	1.46	3.21	-26.47	157.57
3	Tomatoes	0.51	-19.82	-32.77	99.17
4	Fresh Vegetables	2.09	-18.15	-13.32	96.76
5	Onions	0.90	-31.45	-25.99	67.69
6	Condiments And Spices	1.49	4.19	-7.96	58.43
7	Eggs	0.57	14.08	-9.27	27.15
8	Transport Services	1.80	3.03	-1.06	5.86
9	Electricity Charges	3.44	5.96	-0.53	5.25
10	Rice	1.55	0.11	-0.24	1.62
11	Pulse Masoor	0.21	-0.38	-0.42	0.23
12	Text Books	0.50	0.38	-0.01	0.01
13	Marriage Hall Charges	2.25	0.00	0.00	0.00
14	Hospitals Services	1.01	0.00	0.00	0.00
15	Communication Services	1.65	0.00	0.00	0.00
Total		20.18			702.24
Bottom 15 Contributors					
1	Sugar	2.03	-23.04	14.26	-89.74
2	Wheat	3.47	-3.91	5.88	-79.56
3	House Rent	8.61	0.00	2.81	-76.68
4	Vegetable Ghee	2.38	3.13	5.62	-52.85
5	Wheat Flour	3.43	-3.53	4.21	-47.93
6	Solid Fuel	4.48	2.97	2.78	-40.82
7	Motor Fuels	2.49	0.61	4.72	-40.07
8	Liquefied Hydrocarbons	1.00	-0.74	9.31	-28.94
9	Tailoring	1.30	0.38	3.86	-16.84
10	Cooking Oil	0.60	3.71	6.22	-14.40
11	Fresh Fruits	1.45	-1.49	3.75	-13.40
12	Readymade Food	3.80	0.79	0.94	-12.76
13	Cotton Cloth	2.84	0.04	1.09	-11.76
14	Personal Effects N.E.C.	1.21	-1.29	1.61	-8.65
15	Drugs And Medicines	1.58	1.47	1.42	-7.93
Total		40.66			-542.31

Table A14: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation in January 2021					
Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Potatoes	0.74	-16.61	-36.10	182.51
2	Chicken	1.46	3.21	-26.47	157.57
3	Tomatoes	0.51	-19.82	-32.77	99.17
4	Fresh Vegetables	2.09	-18.15	-13.32	96.76
5	Onions	0.90	-31.45	-25.99	67.69
6	Condiments And Spices	1.49	4.19	-7.96	58.43
7	Eggs	0.57	14.08	-9.27	27.15
8	Rice	1.55	0.11	-0.24	1.62
9	Pulse Masoor	0.21	-0.38	-0.42	0.23
10	Marriage Hall Charges	2.25	0.00	0.00	0.00
11	Beverages	0.55	0.00	0.00	0.00
12	Pan Prepared	0.04	0.00	0.00	0.00
13	Ice Cream	0.06	0.00	0.00	0.00
14	Tea	1.26	0.00	0.00	0.00
15	Dessert Preparation	0.01	0.42	0.00	0.00
Total		13.70			691.13
Bottom 15 Contributors					
1	Sugar	2.03	-23.04	14.26	-89.74
2	Wheat	3.47	-3.91	5.88	-79.56
3	Vegetable Ghee	2.38	3.13	5.62	-52.85
4	Wheat Flour	3.43	-3.53	4.21	-47.93
5	Cooking Oil	0.60	3.71	6.22	-14.40
6	Fresh Fruits	1.45	-1.49	3.75	-13.40
7	Readymade Food	3.80	0.79	0.94	-12.76
8	Butter	0.33	1.62	2.93	-3.26
9	Milk Fresh	10.38	0.69	0.08	-2.72
10	Pulse Moong	0.25	-0.70	2.74	-2.48
11	Meat	1.71	1.06	0.36	-2.33
12	Dry Fruits	0.25	1.95	1.78	-1.62
13	Milk Products	0.96	0.00	0.35	-1.03
14	Sweet Meat	0.40	0.08	0.76	-0.96
15	Pulse Gram	0.28	0.18	1.21	-0.94
Total		31.72			-325.98

Table A15: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-food Inflation in January 2021

Top 15 Contributors					
Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Dec-20	Jan-21		
Ranked by Weighted Contribution					
1	Transport Services	1.80	3.03	-1.06	5.86
2	Electricity Charges	3.44	5.96	-0.53	5.25
3	Text Books	0.50	0.38	-0.01	0.01
4	Hospitals Services	1.01	0.00	0.00	0.00
5	Communication Services	1.65	0.00	0.00	0.00
6	Water Supply	0.06	0.00	0.00	0.00
7	Communication Apparatus	0.34	0.00	0.00	0.00
8	Mechanical Services	0.36	0.00	0.00	0.00
9	Newspapers	0.02	0.00	0.00	0.00
10	Cleaning And Laundering	0.02	0.00	0.00	0.00
11	Accommodation Services	0.14	0.00	0.00	0.00
12	Dental Services	0.02	0.00	0.00	0.00
13	Garbage Collection	0.01	0.00	0.00	0.00
14	Motor Vehicle Tax	0.02	0.00	0.00	0.00
15	Postal Services	0.01	0.00	0.00	0.00
Total		9.39			11.11
Bottom 15 Contributors					
1	House Rent	8.61	0.00	2.81	-76.68
2	Solid Fuel	4.48	2.97	2.78	-40.82
3	Motor Fuels	2.49	0.61	4.72	-40.07
4	Liquefied Hydrocarbons	1.00	-0.74	9.31	-28.94
5	Tailoring	1.30	0.38	3.86	-16.84
6	Cotton Cloth	2.84	0.04	1.09	-11.76
7	Personal Effects N.E.C.	1.21	-1.29	1.61	-8.65
8	Drugs And Medicines	1.58	1.47	1.42	-7.93
9	Appliances/Articles/Products For	2.27	0.74	0.79	-5.52
10	Hosiery	0.43	2.03	2.78	-4.96
11	Doctor (Mbbs) Clinic Fee	0.51	1.39	1.92	-4.25
12	Medical Tests	0.40	0.00	2.90	-4.09
13	Washing Soaps, Detergents And	1.70	0.60	0.61	-3.24
14	Personal Grooming Services	1.54	0.09	0.58	-3.18
15	Woolen Cloth	1.10	0.16	0.84	-2.97
Total		31.45			-259.89

Table A16: Distribution of Price Changes (YoY) - Selected Urban CPI Items: January 2021

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Beverages	Cucumber (Kheera), Tomatoes, Onions, Cardamom Large (Loose) (Average Quality).	Pulse Moong (Washed), Gur (Average Quality), Pepper Black National 50 Gm Packet, Cumin Seed (Zeera) White	Beef With Bone (Average Quality), Sweetmeat (Mixed Mithai), Nimko (Loose, Average Quality).	Chilies Powder National 200 Gm Packet, Coriander Seed Powder National 200 Gm Packet, Suji, Chilies (Green), Sugar Refined, Vegetable Ghee Dalda/Habib Or Other Superior Quality 1
Alcoholic Beverages & Tobacco		Cigarettes Capstan 20'S Packet.	Cigarettes Gold Leaf 20'S Packet.	Pan Prepared (Sweet With Beetle Nus).
Clothing & Footwear	Ladies Sandal Bata, Gents Sandal Bata.	School Uniform Girls (Kameez & Shalwar) 24"/26", Full Pant Boy Length 24"/26", Socks Nylon Local (Average Quality), Chaddar (Wash-N-Wear) (2X2.5 Meter).	Underwear Medium Size (Average Quality), Georgette (Average Quality), Linen, Ladies (Average Quality), Children Shoes Power Lite Bata.	Gents Shoes Servis, Pullover Gents Oxford/Bonarza, Heavy Weight Suiting Lawrance Pur (Average Quality), Long Cloth 57" Gul Ahmed/Al Karam, Washing Charges Shalwar Kameez, Gents Shoes Paul Bata, Shirting (Average Quality).
Housing, Water, Elect, Gas & other Fuels	Lpg 11.67 Kg Cylinder, Electricity Charges 51-100 Units, Electricity Charges 101-300 Units, Electricity Charges 301-700 Units.	House Rent Combined, Painter Wage Rate, Cement (Local) 50 Kg Bag, Synthetic Enamel lci Balti 3.64 Litre, Sand (Black Pit), Plumber Wage Rate.	Bricks New 1st Class, Mason Wage Rate, Firewood Whole, Electrician Charges, Unskilled Labor Wage Rate.	Water Charges Per House, Iron Bars (M.S. Bar) 1/2 " 40 Grade, Charges For Refuse/Waste Collection.
Furnishing & Household Equip. Maintenance etc		Plain Carpet, Sewing Machine (Sn) Without Cover, Lota Orient/Lg/Dawlance 1.5 Ton Quality), Electric Iron Dry (National/West Point).	Chair Sheesham Wood With Arm, Split Air Conditioner Bed Sheet Single (Superior Quality), Cot Iron (Charpai).	Mattress Foam Single Bed Molty/Diamond (4" Thick) , Boot Polish Cherry/Kiwi 42 MI, Central Table Set With Glass Top, Harpic 500 MI Bottle, Sofa Set Five Seater, Tube Light Philips 40 Watt
Health		Phenergan Syrup 120MI Bottle, Ventolin Tablets 2 Mg, Gynecologist Fee Per Visit, Ultrasound Abdominal.	Electronic Bp Checking Apparatus, Cac 1000 Tablets Sandoz Bottle, Dental Extraction Fee.	Dettol Medium Bottle, Doctor (Mbbs) Clinic Fee, Septran Tablets, Urine Test (Dr) Charges, Lederplex Syrup Bottle, Johar Joshanda Instant (Sachet) Packet, Glaxose-D 400 Gm Packet.
Transport	Air Fare Economy Class Per Kilometer (National Average), Hi-Speed Diesel, Petrol Super.	Car Suzuki 800 Cc Without Ac, Motorcycle United/Unique 70 Cc, Mobil Oil (Havoline 20W-50), Suzuki Fare Minimum Within City.	Bus Fare Maximum Within City, Mini Bus Fare Minimum Within City, Bus Fare Minimum Within City.	Bicycle, Tire Car Puncture Charges, Tire Car Mehran Tubeless (General), Mini Bus Fare Maximum Within City, Taxi Four Seater Fare.
Communication	Telephone Call Charges, Mobile Call Charges	Courier Charges Minimum Within Zone Outside City (Tcs), Internet Charges (Dsl) 1 Mb (Unlimited).		
Recreation & Culture	Newspaper Daily Jang, Mag The Weekly (Magazine), Newspaper Daily Dawn, Akhbar-E-Jehan Weekly, Recreational Park Charges (Minimum Playland Ticket).	Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Mathematics Book Class Xi (Text Book Board), English Book Class Vi.	English Book Class Ix And X, Laptop Dell/Hp/Acer Core I5, Display (14-15), Ballpoint Pen Local, Urdu Book Class Xi/Inter.	Lead Pencil Goldfish.
Education	Government Medical College/University Tuition Fee For Mbbs (1St Year).	Private Medical College/University Tuition Fee For Mbbs (1St Year).		
Restaurant & Hotels			Cooked Daal At Average Hotel, Cooked Beef At Average Hotel.	Bread Tandoori Standard Size, Tea Prepared Ordinary.
Miscellaneous		Tissue Paper Perfumed Box 100 Napkins, Toilet Soap Lifebuoy 115 Gm, Wall Clock Quartz (Average Quality).	Talcum Powder Viceroy/Blck Cat Large Size, Hair Color (Kala Kola), Tooth Brush (Shield).	Silver Tezabi 24 Caratt, Gold Tezabi 24 Caratt, Shaving Charges, Pampers (Medium Size), Hair Cut Charges For Men, Artificial Jewelry (Locket Set) (Average Quality).

Table A17: Distribution of Price Changes (YoY) - Selected Rural CPI Items: January 2021

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Brinjal, Peas (Matar), Cauliflower (Phool Gobhi), Cucumber (Kheera), Tomatoes, Onions.	Pulse Moong (Washed), Turmeric Powder Loose, Cold Drink (Pepsi/Coca-Cola) 1.5 Liter Bottle.	Beef With Bone (Average Quality), Lemon, Sweetmeat (Mixed Mithai), Ice Cream Walls Cup (Large Size).	Chilies Powder Loose, Eggs Farm, Ginger (Adrak), Chips (Loose), Chilies (Green), Suji, Wheat, Sugar Refined, Biscuit Bakery (Loose, Average Quality), Vegetable Ghee Dalda/Habib 2.5 Kg Tin, Royal Plain (Medium Size).
Alcoholic Beverages & Tobacco		Cigarettes Capstan 20'S Packet, Cigarettes Gold Leaf 20'S Packet.	Tobacco Hukka Twisted.	Pan Prepared (Sweet With Beetle Nuts), Chewing Tobacco (Niswar).
Clothing & Footwear		Chaddar (Wash-N-Wear) (2X2.5 Meter), School Uniform Girls (Kameez & Shalwar) 24"/26", School Uniform Boys (Pant & Shirt) 24"/26".	Footware Ladies Local (Average Quality), Shoe Polish Charges, Tailoring Charges Awami Suit (Male), Dopatta Georgette (Average Quality).	Brassier (Average Quality), Shirting (Average Quality), Vest "Baniyan" For Men Average Quality, Shoe Repair Full Sole, Washing Charges Shalwar Kameez, Georgette (Average Quality), Lawn Printed (Average Quality), Footware Children Local (Average Quality).
Housing, Water, Elect, Gas & other Fuels	Lpg 11.67 Kg Cylinder, Kerosene Oil, Electricity Charges 51-100 Units, Electricity Charges 101-300 Units, Electricity Charges 301-1000 Units.	Mason Wage Rate, Sand (Black Pit), Unskilled Labor Wage Rate.	Cement (Local) 50 Kg Bag, Charges For Refuse/Waste Collection, House Rent Combined, Bajri.	Water Charges Per House, Bricks New 1St Class, Painter Wage Rate, Electrician Charges, Plumber Wage Rate, Firewood Whole, Coal, Carpenter Wage Rate.
Furnishing & Household Equip. Maintenance etc.		Aluminium Cooking Pan (Degchi), Cleanser Powder Vim 900 Gm Polybag, Readymade Quilt (3 Kg).	Washing Machine With Spinner (Super Asia Or Similar Brand) (Sn), Dinner Set Plastic 72 Pieces Super Quality.	Tube Light Philips 40 Watt, Boot Polish Cherry/Kiwi 42 Ml, Towel Medium Size (2' X 3'), Match Box, Bucket (Balti) Plastic Medium Size, Washing Soap 250 Gm Cake (Specify Name), Ceiling Fan 56" Pak/Younas/Millat.
Health		Cost Of Surgery (C-Section), Physiotherapist Fee Per Visit, Hydryllin Syrup 120 Ml Bottle.	Johar Joshanda Instant (Sachet) Packet, Panadol Tablets Plain, Cac 1000 Tablets Sandoz Bottle.	Dettol Medium Bottle, Doctor (Mbbs) Clinic Fee, Dental Surgeon Fee Per Visit, Inderal Tablets 10 Mg, X-Ray (Chest) Charges, Blood Test (Cp) Charges.
Transport	Air Fare Economy Class Per Kilometer, Hi-Speed Diesel Petrol Super, Cng, Car Tax 800 Cc To 1500 Cc, Bus Fare Outside City (Non Ac)	Motorcycle Service Charges, Mobil Oil (Havdine 20W-50), Tire Cycle, Train Fare Economy Per Person.	Bicycle, Chingchi Rickshaw Charges, Minimum, Motorcycle Honda Cd 70.	Tire Car Mehran Tubeless (General).
Communication	Telephone Call Charges, Mobile Call Charges, Postal Registration Charges.	Internet Charges (Dsl) 1 Mb (Unlimited), Mobile Set With Rear Camera And Without Touch Screen.		
Recreation & Culture		Newspaper Daily Jang, Cable Charges.	Lead Pencil Goldfish, English Exercise Book (With Lines) 80 To 100 Pages, Books Class Xi Complete Set, Ballpoint Pen Local, English Books Class Ix And X, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5.	
Education		Private School Fee English Medium Average Standard (Class V).		
Restaurant & Hotels		Marriage Hall Charges With Furniture.	Chicken Roast (Full) (Average Quality).	Cooked Beef At Average Hotel, Bread Tandoori Standard Size, Chicken Biryani Full/Double, Cooked Daal At Average Hotel.
Miscellaneous		Suitcase Ragzine (24"X16"X6") (Average Quality), Shaving Cream (Touchme Large/Admiral).	Toilet Soap Lux 75 Gm, Shampoo Sun Silk/Pantene MI Bottle, Trunk Medium Size (Average Quality).	Gold Tezabi 24 Caratt, Tooth Paste Colgate 75 Gm, Hair Cut Charges For Men, Shaving Charges, Artificial Jewelry (Locket Set) (Average Quality), Talcum Powder Viceroy/Black Cat.

Table A18: Distribution of Price Changes (YoY) - WPI Items: January 2021				
Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Agriculture, Forestry & Fishery Products	Vegetables, Hides, Skins & Fur Skins, Raw, Edible Roots / Potatoes, Pulses, Poultry, Fish Live Fresh Or Chilled, Fresh Fruits.	Raw Animal Materials / Wool.	Stimulant & Spice Crops, Cotton Seeds, Dry Fruits.	Unmanufactured Tobacco, Millet / Bajra, Sugar Crops, Eggs, Sorghum / Jowar, Maize, Wheat, Fibre Crops, Raw Milk From Bovine Animals, Rice, Other Oil Seeds, Fuel Wood In Logs.
Ores & Minerals, Electricity Gas & Water	Coal Not Agglomerated, Electrical Energy.	Natural Gas Liquefied.	Salt & Pure Sodium Chloride.	
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Other Cereal Flour, Blended Yarn, Cotton Yarn, Nylon Yarn, Tobacco Products, Woden Carpets, Other Leather N.E.C.	Beverages, Leather Without Hair, Mineral Water, Other Fabrics, Coffee & Tea, Vegetables & Fruit Juice, Synthetic Carpets.	Fruit Juices, Dairy Products N.E.C, Blankets, Chocolate, Bed Sheets, Woven Fabrics, Milk & Cream In Solid Form, Hosiery Products, Quilts, Other Food Products, Readymade Garments.	Spices, Sugar Confectionary, Cotton Fabrics, Silk & Rayon Fabrics, Footwears, Sugar Refined, Vegetable Ghee, Ice Cream, Oil Cakes, Dried Fruits & Nuts, Meat Of Animals, Vegetable Oils Refined, Processed Liquid Milk, Wheat Flour, Towels
Other Transportable Goods except Metal Products, Machinery and Equipments	Kerosine Oil, Diesel Oil, Motor Spirit, Fertilizers, Hard Board, Printing Paper, Dyeing Material.	Medicines, Furnace Oil, Auto Tyres, Glass Sheets, Soaps & Detergents, Mobil Oil, Ceramics & Sanitary Fixture, Insecticides, Matches.	Paints & Varnishes, Chemicals, Plastic Products, Cement, Bed Foam.	Timber, Pesticides, Steel Bar & Sheets, Other Glass Articles, Bricks, Blocks & Tiles.
Metal Product Machinery & Equipment	Vacuum Pumps, Engines & Motors, Concrete Mixture, Cultivators.	Radio & Television, Motorcycles, Motor Vehicles, Steel Products.	Air Conditioners, Fridge, Washm, Sewm, Fans, Iron, Chuff Cutter, Lighting Equipments.	Bicycles, Lathe Machines, Pipe Fittings, Tractors, Electric Wires.

Table A19: International Commodity Prices/Indices				
	Oct-20	Nov-20	Dec-20	Jan-21
Energy				
Crude Oil (US\$ per barrel)*	39.9	42.3	48.7	53.6
Energy Index (2010 = 100)	51.4	54.6	62.9	69.2
Food				
Rice (\$/MT)	471.0	489.0	520.0	545.0
Wheat (\$/MT)##	NA	NA	NA	NA
Sugar (US cent/ pound)^	13.7	14.1	14.1	15.2
Palm Oil (\$/MT)	819.3	917.8	1,016.4	990.3
Soybean Oil (\$/MT)	914.8	973.9	1,026.2	1,075.5
Non-Food Non-Energy				
Cotton Outlook 'A' Index #^	74.8	77.7	81.0	87.2
Metal Price Index (2010 = 100)	86.3	91.4	98.0	99.7
Copper (\$/MT)	6,713.8	7,068.9	7,772.2	7,972.2
Aluminum (\$/MT)	1,806.1	1,935.3	2,014.7	2,004.0
Iron Ore (\$ cents/dry MT)	119.8	124.4	155.4	169.6
Tin (\$/MT)	18,176.6	18,522.5	19,732.0	21,920.2
Nickel (\$/MT)	15,239.4	15,807.7	16,823.0	17,863.2
Zinc (\$/MT)	2,440.7	2,671.6	2,779.9	2,705.3
Lead (\$/MT)	1,776.3	1,915.6	2,020.5	2,014.7
Uranium (\$/MT)@	29.7	29.7	30.2	29.6
DAP (\$/MT)	357.1	359.6	388.5	421.3
Urea (\$/MT)	245.0	245.0	245.0	265.0

Source: World Bank for all variables / indices except Uranium which is taken from Cameco (World Largest Uranium Producer)

@ Data has been taken from Cameco website as it is not available in World Bank dataset.

^ The measurement unit for sugar and Cotton is US cent/pound in IMF data source, whereas it is US dollar / kg in World bank dataset.

The result of two datasets can be reconciled using conversion formula: 1 US \$ / kilogram = 45.359237 U.S. cents / pound. Both the variables have been converted to the measurement unit US cent/ pound.

\$/MT = US\$ per metric tonne.

* Crude Oil (Petroleum), simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai fateh

Middling 1-3/32 inch staple, Liverpool Index "A", average of the cheapest Cts/lb five of fourteen styles, CIF Liverpool (Cotton Outlook, Liverpool). From January 1968 to June 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16.2

Wheat numbers for the month of July, 2020 onwards have not been provided by the World Bank in their latest release

DAP: Diammonium Phosphate

Table A20: National CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	103.17	107.15	114.29	123.86	135.38
Aug	102.80	107.31	113.93	125.89	136.23
Sep	103.23	108.05	113.90	126.86	138.32
Oct	104.19	109.22	116.32	129.16	140.67
Nov	104.69	109.95	116.18	130.90	141.83
Dec	104.08	109.92	115.82	130.45	140.86
Jan	104.53	110.01	116.12	133.03	140.56
Feb	105.04	109.72	117.12	131.64	
Mar	106.14	109.96	119.46	131.69	
Apr	106.91	111.15	120.33	131.59	
May	106.36	111.65	121.05	131.01	
Jun	106.54	112.58	121.63	132.08	
Seasonally Adjusted Series					
Jul	102.84	106.80	113.94	123.50	135.01
Aug	102.50	107.04	113.69	125.67	136.03
Sep	102.78	107.62	113.50	126.44	137.89
Oct	103.21	108.18	115.19	127.88	139.23
Nov	103.68	108.86	114.98	129.49	140.26
Dec	104.09	109.85	115.69	130.25	140.59
Jan	104.65	110.13	116.23	133.14	140.65
Feb	105.83	110.52	117.95	132.53	
Mar	106.84	110.66	120.20	132.46	
Apr	107.09	111.36	120.58	130.90	
May	107.09	112.45	121.95	132.02	
Jun	107.20	113.31	122.46	133.03	

Table A21: Urban CPI Data Series Original and Seasonally Adjusted

Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	103.20	107.71	114.94	124.95	134.73
Aug	102.73	107.93	114.58	126.77	135.82
Sep	103.06	108.38	114.49	127.72	137.53
Oct	103.87	109.34	117.04	129.75	139.27
Nov	104.36	110.03	116.94	131.05	140.16
Dec	103.74	110.08	116.57	130.57	139.67
Jan	104.59	110.28	117.07	132.77	139.45
Feb	105.12	110.12	118.08	131.32	
Mar	106.18	110.43	120.29	131.49	
Apr	107.20	111.94	121.29	130.60	
May	106.86	112.53	122.11	130.99	
Jun	107.08	113.34	122.52	131.89	
Seasonally Adjusted Series					
Jul	102.78	107.26	114.49	124.48	134.25
Aug	102.33	107.54	114.20	126.39	135.44
Sep	102.62	107.95	114.07	127.28	137.07
Oct	103.04	108.46	116.09	128.67	138.09
Nov	103.54	109.13	115.94	129.89	138.89
Dec	103.95	110.21	116.65	130.62	139.67
Jan	104.79	110.49	117.29	133.02	139.69
Feb	105.93	110.95	118.93	132.23	
Mar	106.93	111.19	121.09	132.32	
Apr	107.26	112.03	121.40	130.75	
May	107.37	113.10	122.76	131.71	
Jun	107.60	113.92	123.17	132.65	

Table A22: Rural CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	103.12	106.30	113.30	122.22	136.36
Aug	102.90	106.37	112.96	124.56	136.84
Sep	103.49	107.54	113.01	125.55	139.51
Oct	104.68	109.05	115.23	128.28	142.79
Nov	105.18	109.83	115.03	130.67	144.34
Dec	104.59	109.68	114.70	130.28	142.65
Jan	104.44	109.60	114.68	133.42	142.23
Feb	104.91	109.11	115.68	132.13	
Mar	106.09	109.25	118.21	132.00	
Apr	106.47	109.95	118.89	130.58	
May	105.60	110.33	119.45	131.03	
Jun	105.73	111.44	120.29	132.36	
Seasonally Adjusted Series					
Jul	102.94	106.11	113.11	122.02	136.15
Aug	102.76	106.28	112.92	124.58	136.91
Sep	103.02	107.12	112.63	125.18	139.14
Oct	103.46	107.75	113.83	126.68	140.96
Nov	103.91	108.45	113.52	128.90	142.33
Dec	104.31	109.29	114.23	129.70	141.97
Jan	104.45	109.58	114.63	133.34	142.11
Feb	105.68	109.88	116.46	132.98	
Mar	106.71	109.87	118.85	132.68	
Apr	106.84	110.36	119.35	131.12	
May	106.66	111.48	120.74	132.49	
Jun	106.60	112.41	121.38	133.62	

Table A23: National CPI Monthly & Average Seasonal Factors						
Period	FY17	FY18	FY19	FY20	FY21	Average
Jul	100.32	100.32	100.31	100.29	100.28	100.30
Aug	100.29	100.25	100.22	100.18	100.15	100.22
Sep	100.44	100.40	100.36	100.33	100.31	100.37
Oct	100.96	100.97	100.98	101.01	101.03	100.99
Nov	100.97	101.00	101.05	101.09	101.12	101.04
Dec	99.99	100.07	100.12	100.16	100.20	100.11
Jan	99.89	99.89	99.90	99.91	99.93	99.91
Feb	99.25	99.27	99.30	99.33		99.29
Mar	99.35	99.37	99.39	99.42		99.38
Apr	99.83	99.81	99.79	99.76		99.80
May	99.32	99.29	99.26	99.23		99.28
Jun	99.39	99.36	99.33	99.28		99.34

Table A24: Urban CPI Monthly & Average Seasonal Factors						
Period	FY17	FY18	FY19	FY20	FY21	Average
Jul	100.41	100.42	100.40	100.38	100.36	100.39
Aug	100.39	100.36	100.34	100.30	100.28	100.33
Sep	100.43	100.40	100.37	100.35	100.34	100.38
Oct	100.81	100.81	100.82	100.84	100.86	100.83
Nov	100.79	100.82	100.86	100.89	100.92	100.86
Dec	99.80	99.88	99.93	99.97	100.00	99.92
Jan	99.81	99.81	99.81	99.82	99.83	99.82
Feb	99.24	99.25	99.28	99.31		99.27
Mar	99.30	99.32	99.34	99.37		99.33
Apr	99.94	99.92	99.91	99.89		99.92
May	99.53	99.50	99.47	99.45		99.49
Jun	99.52	99.50	99.47	99.43		99.48

Table A25: Rural CPI Monthly & Average Seasonal Factors						
Period	FY17	FY18	FY19	FY20	FY21	Average
Jul	100.17	100.18	100.17	100.17	100.15	100.17
Aug	100.13	100.08	100.04	99.99	99.95	100.04
Sep	100.46	100.39	100.34	100.29	100.27	100.35
Oct	101.18	101.21	101.23	101.26	101.30	101.24
Nov	101.23	101.28	101.33	101.38	101.41	101.32
Dec	100.27	100.35	100.41	100.45	100.48	100.39
Jan	99.99	100.02	100.04	100.06	100.09	100.04
Feb	99.27	99.30	99.33	99.36		99.31
Mar	99.42	99.44	99.46	99.49		99.45
Apr	99.65	99.63	99.61	99.59		99.62
May	99.00	98.97	98.93	98.90		98.95
Jun	99.19	99.14	99.10	99.06		99.12

Table A26: National CPI (Month-on-Month) Original & Seasonally Adjusted					
Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	1.44	0.57	1.51	1.83	2.50
Aug	-0.36	0.15	-0.31	1.64	0.63
Sep	0.42	0.69	-0.03	0.77	1.53
Oct	0.93	1.09	2.12	1.81	1.70
Nov	0.47	0.66	-0.12	1.35	0.82
Dec	-0.58	-0.03	-0.30	-0.34	-0.68
Jan	0.43	0.08	0.25	1.97	-0.21
Feb	0.48	-0.26	0.87	-1.04	
Mar	1.05	0.22	2.00	0.04	
Apr	0.72	1.08	0.73	-0.84	
May	-0.52	0.46	0.60	0.32	
Jun	0.17	0.83	0.48	0.82	
Seasonally Adjusted Series					
Jul	0.55	-0.37	0.55	0.85	1.49
Aug	-0.33	0.22	-0.22	1.75	0.75
Sep	0.27	0.54	-0.17	0.62	1.37
Oct	0.42	0.52	1.49	1.14	0.97
Nov	0.46	0.63	-0.18	1.26	0.74
Dec	0.39	0.91	0.62	0.58	0.23
Jan	0.54	0.26	0.47	2.22	0.05
Feb	1.13	0.36	1.47	-0.46	
Mar	0.95	0.12	1.91	-0.05	
Apr	0.24	0.63	0.32	-1.18	
May	-0.01	0.98	1.14	0.86	
Jun	0.10	0.77	0.41	0.76	

Table A27: Urban CPI (Month-on-Month) Original & Seasonally Adjusted Series					
Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	1.47	0.59	1.41	1.98	2.15
Aug	-0.46	0.20	-0.31	1.46	0.81
Sep	0.32	0.42	-0.08	0.75	1.26
Oct	0.79	0.89	2.23	1.59	1.27
Nov	0.47	0.63	-0.09	1.00	0.64
Dec	-0.59	0.05	-0.32	-0.37	-0.35
Jan	0.82	0.18	0.43	1.68	-0.16
Feb	0.51	-0.15	0.86	-1.09	
Mar	1.01	0.28	1.87	0.13	
Apr	0.96	1.37	0.83	-0.68	
May	-0.32	0.53	0.68	0.30	
Jun	0.21	0.72	0.34	0.69	
Seasonally Adjusted Series					
Jul	0.60	-0.31	0.50	1.06	1.21
Aug	-0.44	0.26	-0.25	1.53	0.88
Sep	0.29	0.38	-0.11	0.70	1.20
Oct	0.41	0.48	1.77	1.10	0.74
Nov	0.48	0.61	-0.12	0.95	0.58
Dec	0.40	0.99	0.61	0.56	0.56
Jan	0.81	0.25	0.55	1.84	0.02
Feb	1.09	0.41	1.40	-0.59	
Mar	0.94	0.21	1.81	0.07	
Apr	0.31	0.76	0.26	-1.19	
May	0.10	0.95	1.12	0.74	
Jun	0.21	0.73	0.34	0.71	

Table A28: Rural CPI (Month-on-Month) Original & Seasonally Adjusted					
Original Series					
Period	FY17	FY18	FY19	FY20	FY21
Jul	1.39	0.54	1.67	1.60	3.02
Aug	-0.21	0.07	-0.30	1.91	0.35
Sep	0.57	1.10	0.04	0.79	1.95
Oct	1.15	1.40	1.96	2.17	2.35
Nov	0.48	0.72	-0.17	1.86	1.09
Dec	-0.56	-0.14	-0.29	-0.30	-1.17
Jan	-0.14	-0.07	-0.02	2.41	-0.29
Feb	0.45	-0.45	0.87	-0.97	
Mar	1.12	0.13	2.19	-0.10	
Apr	0.36	0.64	0.58	-1.08	
May	-0.82	0.35	0.47	0.34	
Jun	0.12	1.01	0.70	1.02	
Seasonally Adjusted Series					
Jul	0.47	-0.46	0.62	0.53	1.89
Aug	-0.17	0.16	-0.17	2.10	0.56
Sep	0.25	0.79	-0.25	0.49	1.63
Oct	0.43	0.59	1.06	1.20	1.31
Nov	0.43	0.65	-0.27	1.75	0.97
Dec	0.39	0.78	0.63	0.63	-0.25
Jan	0.13	0.26	0.35	2.80	0.10
Feb	1.18	0.27	1.59	-0.26	
Mar	0.97	-0.01	2.05	-0.23	
Apr	0.12	0.45	0.42	-1.17	
May	-0.17	1.02	1.16	1.04	
Jun	-0.06	0.83	0.53	0.85	

Figure A1: National CPI Non-food Inflation (YoY, 12MMA, MoM in percent)



Figure A2: Urban CPI Non-food Inflation (YoY, 12MMA, MoM in percent)

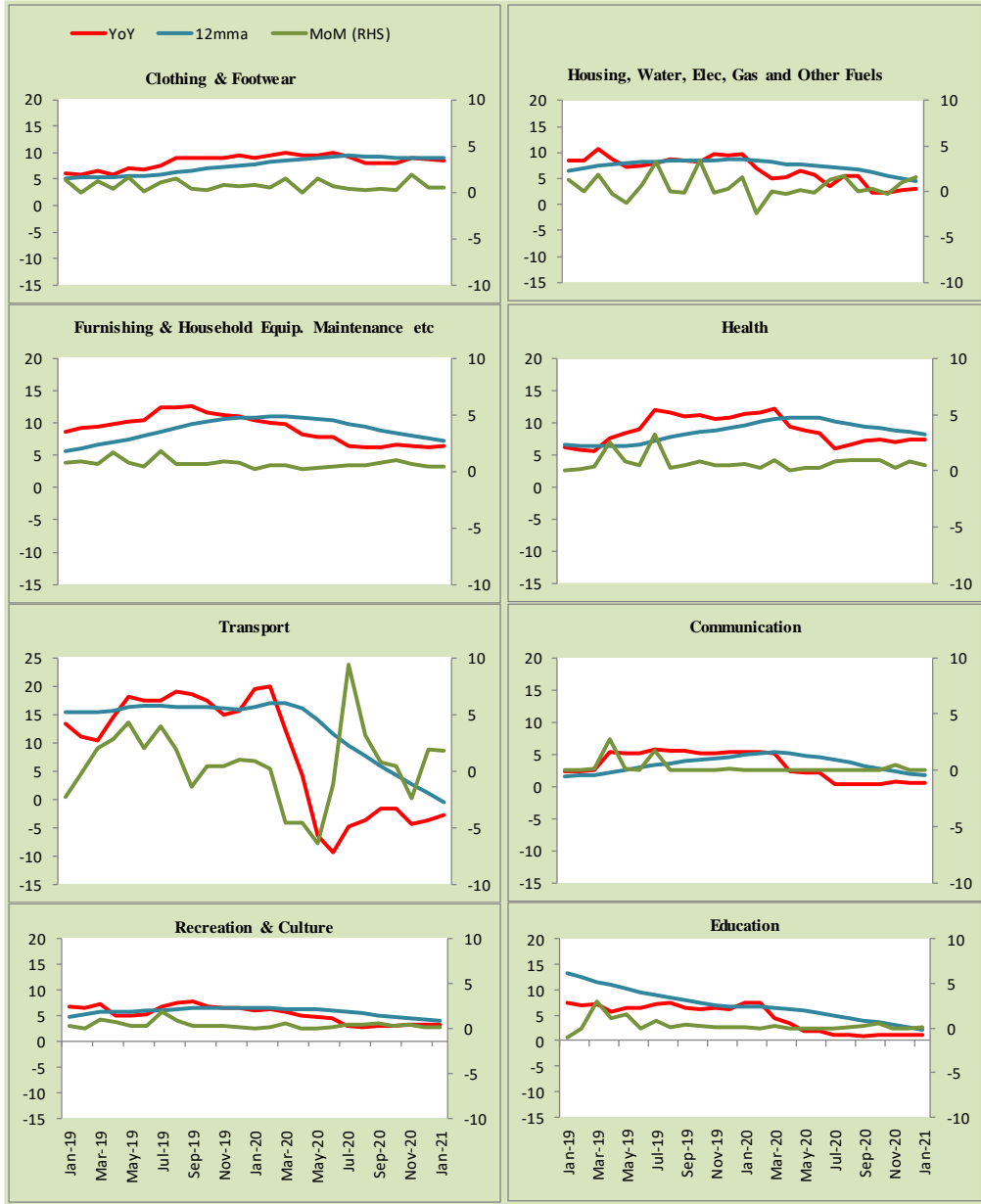
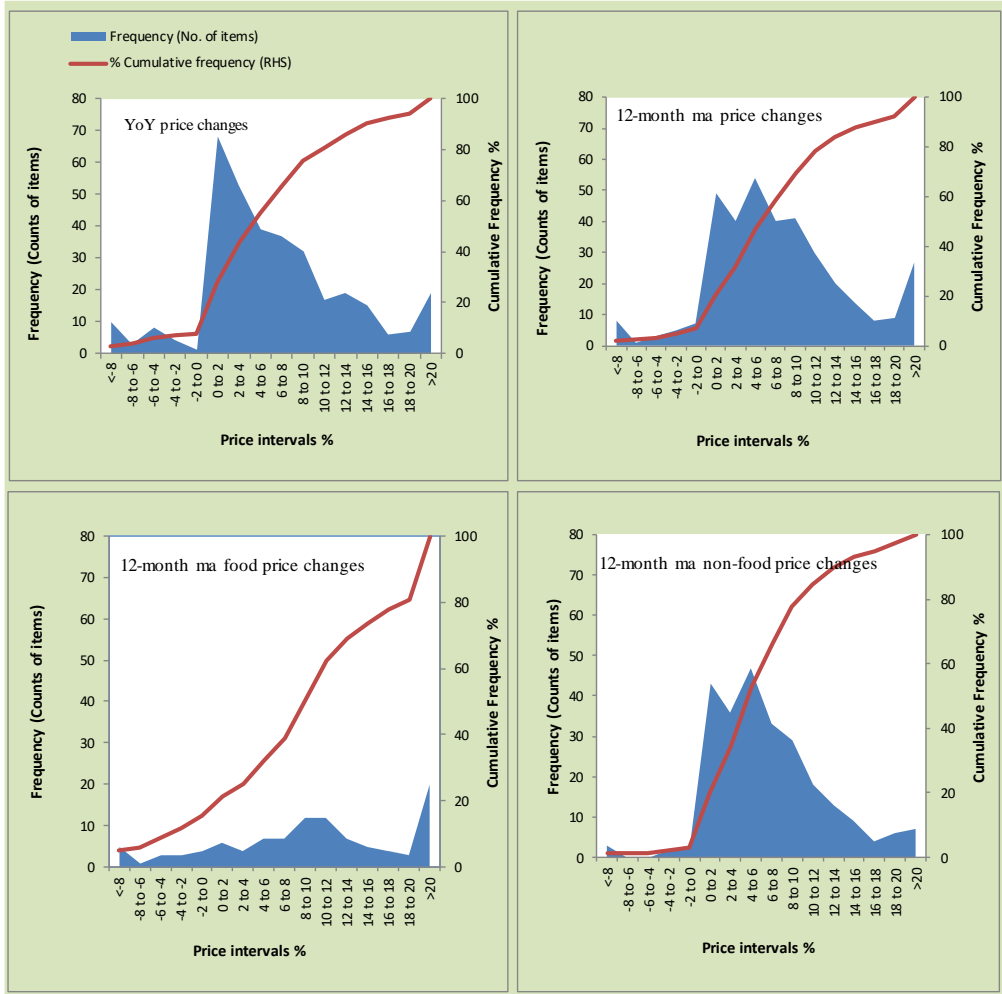


Figure A3: Rural CPI Non-food Inflation (YoY, 12MMA, MoM in percent)



Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)



Total items in CPI basket (356), Food items (103) and Non-food items (253)

Figure A5: Frequency Distribution of Price Changes of Rural CPI Items (YoY)

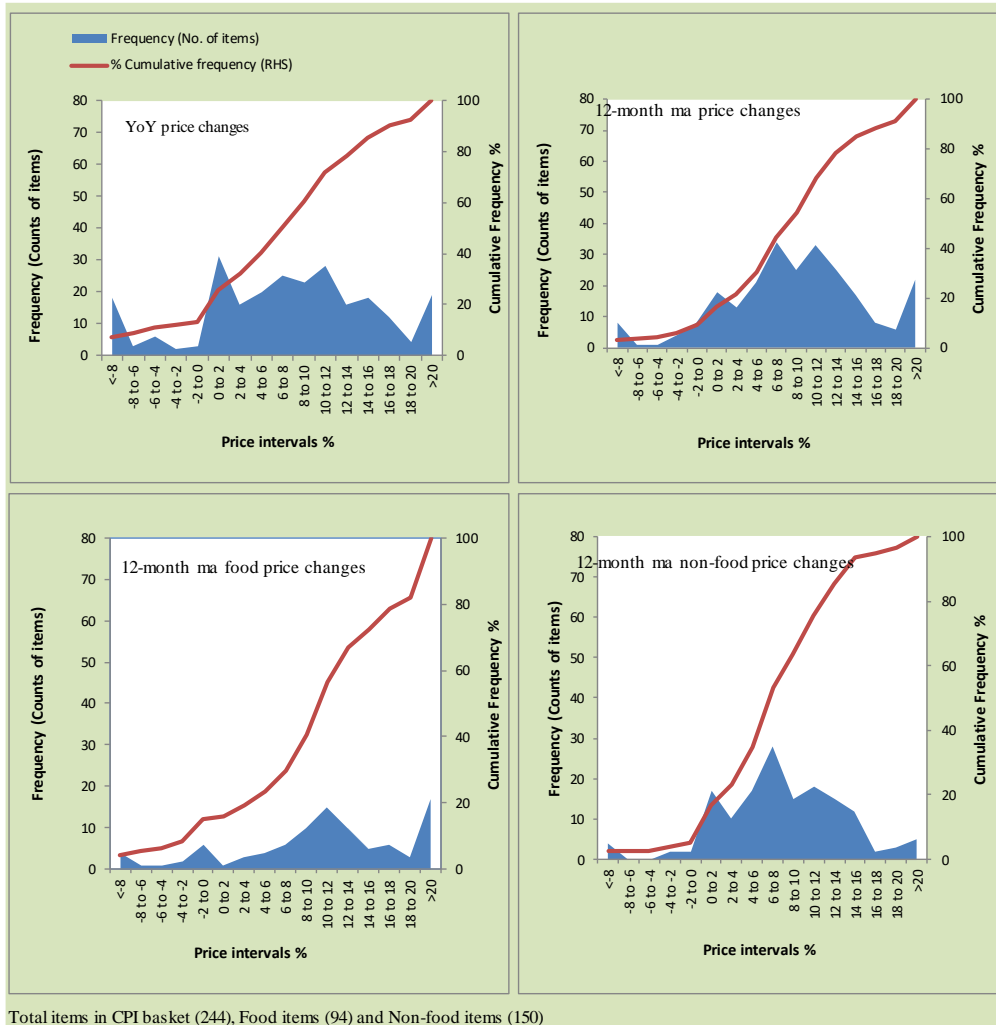
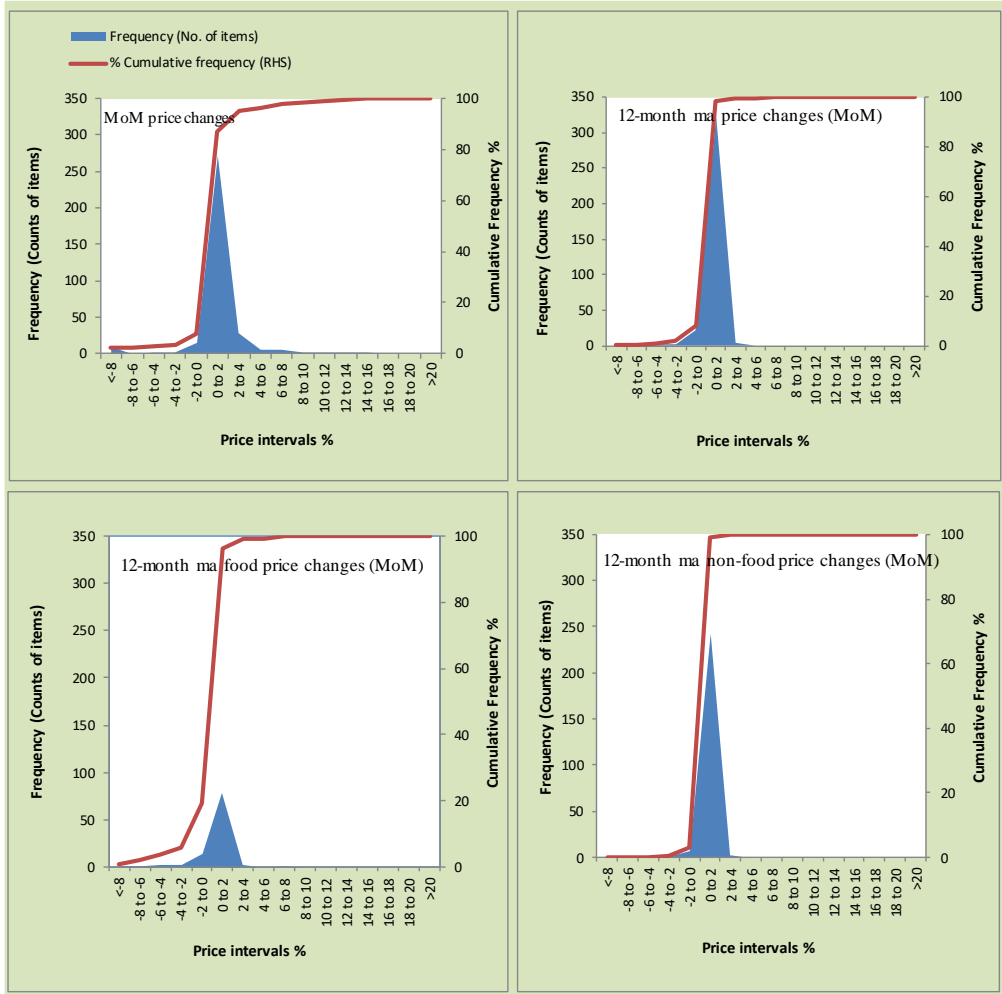


Figure A6: Frequency Distribution of Price Changes of Urban CPI Items (MoM)



Total items in CPI basket (356), Food items (103) and Non-food items (253)

Figure A7: Frequency Distribution of Price Changes of Rural CPI Items (MoM)

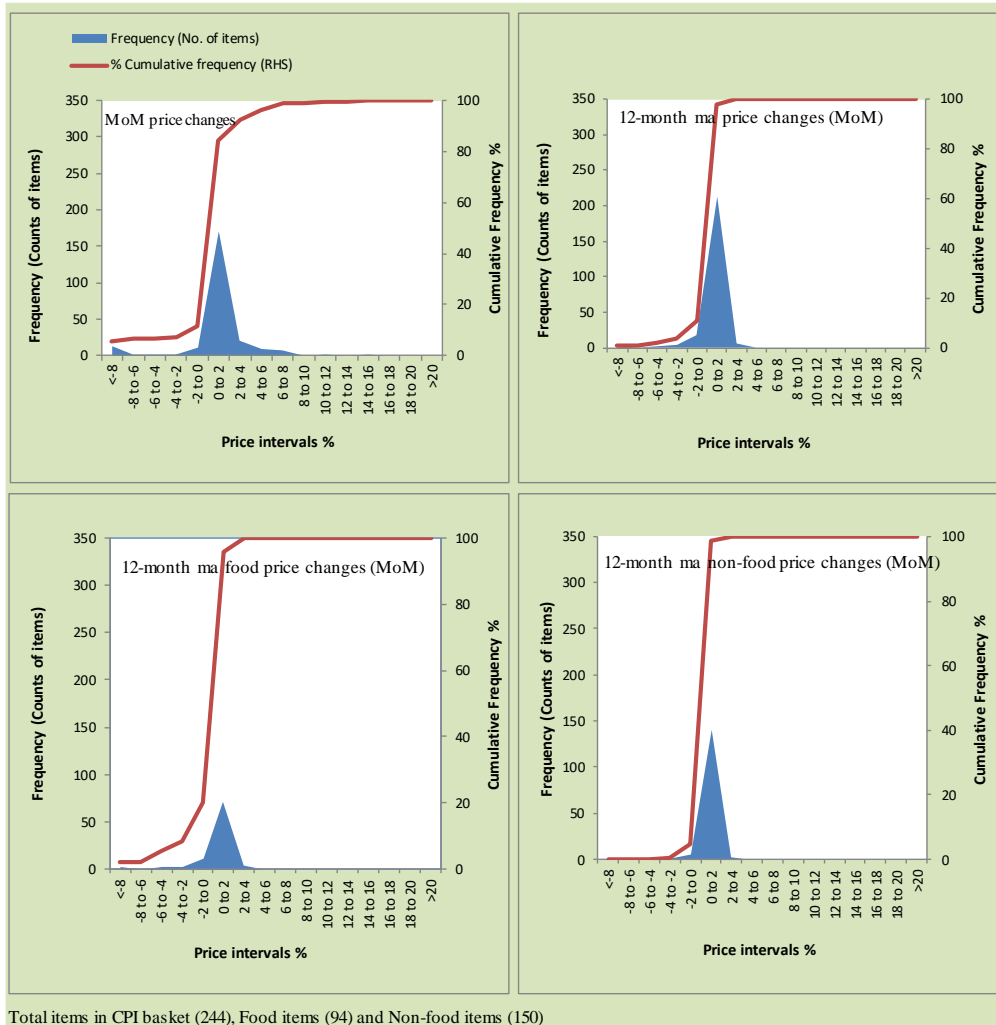
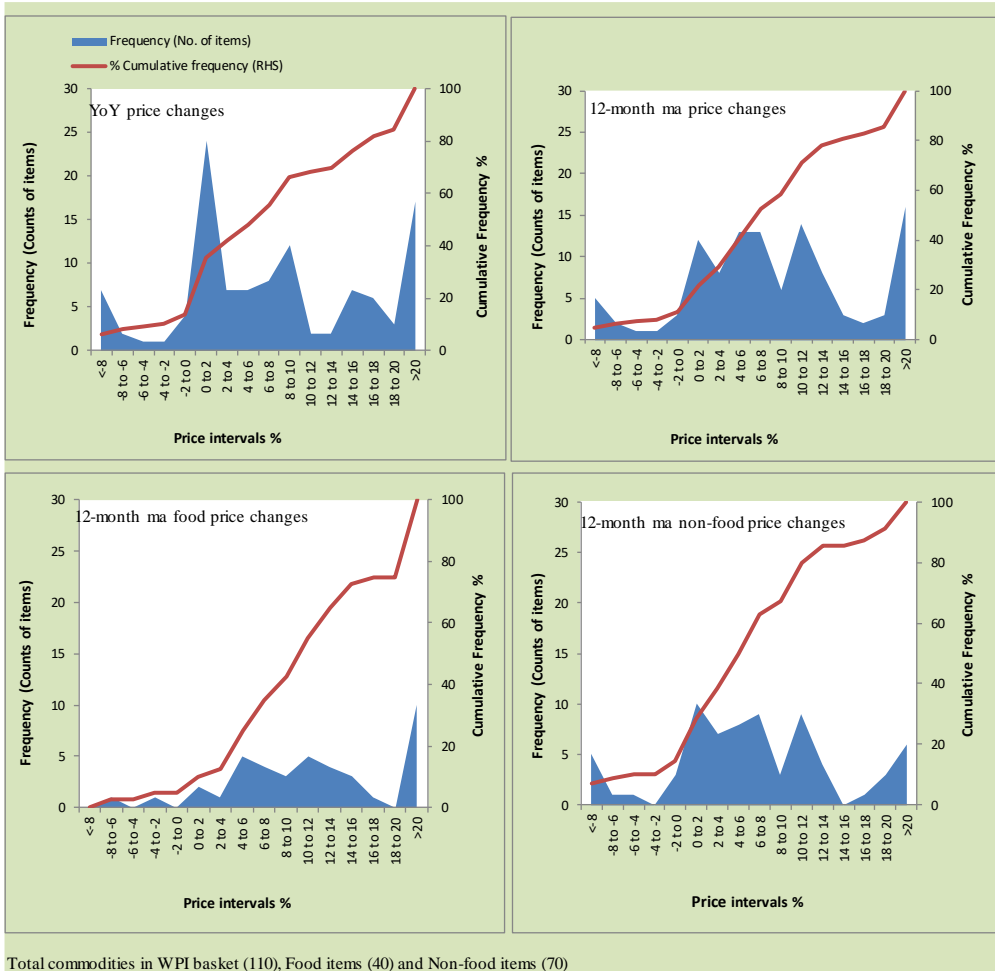


Figure A8: Frequency Distribution of Price Changes of WPI Commodities (YoY)



Total commodities in WPI basket (110), Food items (40) and Non-food items (70)

Annexure B

Technical Notes, Definitions and Methodologies

a) Technical Notes

1. All the three measures of inflation, viz. CPI (National, Urban and Rural), WPI and SPI are computed by the following Laspeyres Index formula:

$$I_t = \sum_j w_0^j \left(\frac{P_t^j}{P_0^j} \right)$$

Where I_t is price index, w_0^j is weight of commodity j in the overall basket, P_t^j is price of commodity j in period t and P_0^j is its price in the base year.

2. Base year for all the indices is the year 2015-16.
3. CPI baskets for urban and rural areas contains 356 and 244 consumers' items respectively; WPI basket contains 419 items; SPI contains 51 items.
4. YoY inflation is the percent change of an index in a given month over the index in the same month of the last year. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

5. Period average inflation is the percent change of the average index during the period from July to the given month of a fiscal year over the average index during the corresponding period of the last year. It is computed as follows:

$$\bar{\pi}_t = \left(\frac{\sum_{i=0}^{t-v} I_{t-i}}{\sum_{i=0}^{t-12-v} I_{t-12-i}} - 1 \right) \times 100$$

Where v is the serial number of the month of July of current fiscal year in a given time series.

6. Monthly inflation is the percent change of an index in a given month over the index in the preceding month. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

7. 12-month moving average inflation (Long-run trend inflation) is the percent change of 12-month moving average of a price index; it is computed as follows:

$$\tilde{\pi}_t = \left(\frac{\sum_{i=0}^{11} I_{t-i}}{\sum_{i=0}^{11} I_{t-12-i}} - 1 \right) \times 100$$

8. Core Inflation is defined as the persistent component of measured inflation that excludes volatile and controlled prices. It reflects the normal supply and demand conditions in the economy. Core inflation is computed by the following three methods:

- a) Non-food, Non-energy inflation (NFNE inflation); it is computed by excluding food group and energy items (kerosene oil, petrol, diesel, CNG, electricity and natural gas) from the CPI basket.
- b) 20% trimmed-mean inflation; it is computed through the following steps:
 - i. All CPI items are arranged in ascending order according to YoY/12-month moving average/monthly/period average changes in their price indices in a given month.
 - ii. 20 percent of the items showing extreme changes are excluded with 10 percent of the items at the top of the list (corresponding to cumulative weight of 90% or more) and 10 percent of the items at the bottom of the list (corresponding to cumulative weight of 10 percent or less).
 - iii. The weighted mean of the changes in price indices of the rest of the items is core inflation.

9. Weighted contribution of different items (or sub-groups) to total inflation is worked out as below:

Let the overall index (I_t) is the weighted average of price indexes of individual items or sub-groups (I_{it}), i.e.

$$I_t = \sum_i w_i \cdot I_{it}$$

The weighted contribution of a single item (or a sub-group) to overall inflation is defined as below:

$$C_{it} = \alpha_{it-12} \cdot w_i \cdot \left(\frac{\pi_{it}}{\pi_t} \right)$$

Where C_{it} : Contribution of i^{th} item to the overall inflation

$$\alpha_{it-12} = \frac{I_{it-12}}{I_{t-12}}; \text{ i.e. ratio of item's index to overall index in the}$$

reference month

w_i : Weights of i^{th} item

π_{it} : Inflation of i^{th} item

π_t : Overall inflation

10. Annualized rate of inflation (based on a month-on-month rate π) is computed as follows

$$\text{Annualized } \pi = \left(\left(1 + \frac{\pi}{100} \right)^{12} - 1 \right) \times 100$$

b) Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 356 and 244 items of CPI urban and rural baskets respectively. It is based on month-on-month (MoM) change in the prices of these items and can be obtained by estimating what is known as an 'inflation diffusion index' (IDI) as below:

$$IDI = \frac{\text{No. of items with positive MoM change in price} - \text{No. of items with negative MoM change in price}}{\text{No. of items for which prices are reported}} * 100$$

Thus, it is the difference between the share of items with increasing prices (i.e. depicting inflation) and the share of items with falling prices (i.e. depicting deflation) in CPI amongst the items for which prices have altered or remained constant¹.

Based upon item level prices data from July 2001 to February 2011, inflation diffusion indices for overall (general) CPI basket and for all groups in CPI basket (except House Rent Index being single item) were computed. A simple analysis² suggests that IDI was a leading indicator for Pakistan's YoY inflation.

¹ We do not observe the prices of certain items (like the seasonal items) during certain periods of time. To calculate the inflation diffusion index we consider the items for which prices have been reported (irrespective of changed or not) during the month under review.

² Formal test shows one way 'Granger' causality from IDI to YoY inflation.