

Inflation Monitor

June 2017



State Bank of Pakistan

Statistics & DWH Department

ISSN 1992-8327 (print)

ISSN 1992-8335 (online)

The analysis in this document is based on data

- Provided by Pakistan Bureau of Statistics (PBS), for domestic inflation analysis
- Retrieved from IMF & World Bank websites for global inflation analysis

http://www.sbp.org.pk/publications/inflation_Monitor

Contents		Page
1.	Inflation in Brief	1
2.	City- wise Inflation	7
3.	Income Group- wise Inflation	8
4.	Weighted Contribution	10
5.	Inflation Diffusion Index	11
6.	Domestic Commodity Prices	12
7.	Global Commodity Prices	12
8.	Seasonal Adjustment in CPI	13
Annexure A		
Table A1	CPI Inflation by Groups	17
Table A2	Distribution of Price Changes (YoY) of CPI Basket	17
Table A3	Top and Bottom 15 Contributors to CPI Inflation (YoY)	18
Table A3.1	Top and Bottom 15 Contributors to CPI Inflation (MoM)	19
Table A3.2	Top Fifteen Contributors to CPI Inflation (YoY)	20
Table A3.3	Top Ten Contributors to CPI Food Inflation (YoY)	21
Table A3.4	Top Ten Contributors to CPI Non-Food Inflation (YoY)	22
Table A4	Distribution of Price Changes (YoY) - Selected CPI Items	23
Table A5	City-wise CPI Inflation by Income Groups	24
Table A6	City- wise CPI Inflation (YoY)	25
Table A7	Income Group-wise Inflation	26
Table A8	SPI Item-wise Price Movements	27
Table A9	Distribution of Price Changes (YoY)-WPI Items	28
Table A10	Consumer Price Index Numbers by Major Groups and Composite Commodities	29-30
Table A11	Wholesale Price Index Numbers by Major Groups and Composite Commodities	31-32
Table A12	Price Indices	33
Table A13	International Commodity Prices/ Indices	34
Table A14	CPI Data Series- Original and Seasonally Adjusted	35
Table A15	CPI Food Data Series- Original and Seasonally Adjusted	36
Table A16	CPI Monthly & Average Seasonal Factors	37
Table A17	CPI Food Monthly & Average Seasonal Factors	37
Table A18	CPI Month-on-Month % Change- Original & Seasonally Adjusted	38
Table A19	CPI Food Month-on-Month % Change- Original & Seasonally Adjusted	39
Figure A1	CPI Non-food Inflation	40
Figure A2	Frequency Distribution of Price Changes of CPI Items	41
Figure A3	Frequency Distribution of Price Changes of WPI Commodities	42
Figure A4	Group- wise/ overall Inflation Diffusion Index and Respective/ Overall YoY Inflation	43
Annexure B	Technical Notes	44-47

Team

- Naseer Ahmad Additional Director
naseer.ahmed@sbp.org.pk
- Muhammad Abdus Salam Joint Director
muhammad.abdussalam@sbp.org.pk

Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at level of 3.9 percent on year-on-year basis in June 2017 as compared to 5.0 percent in the previous month and 3.2 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at level of -0.4 percent in June 2017 compared to zero level in the previous month and 0.6 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at -0.26 percent in June 2017 compared to 0.32 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis is recorded at 4.2 percent in June 2017 as compared to 4.8 percent in the previous month and 3.7 percent during corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) is recorded at zero level in June 2017 as compared to 0.2 percent in the previous and 0.2 percent during corresponding month of last year.
5. Non-food, non-energy inflation measured by CPI Core (NFNE) on year-on-year basis is recorded at 5.5 percent in June 2017 as in the previous month. It was 4.6 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis recorded at 0.1 percent in June 2017 compared to 0.2 percent in the previous month. Core NFNE inflation was at the level of current month in the corresponding month of last year.

7. WPI inflation on year-on-year basis decreased to 3.3 percent in June 2017 as compared to 5.2 percent in the previous month and 0.2 percent during the corresponding month of last year.
8. WPI inflation on month-on-month basis recorded at -0.5 percent in June 2017 as compared to -0.2 percent in the previous month and 1.4 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis recorded at 1.9 percent in June 2017 as compared to 2.9 percent in the previous month. It was 1.1 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at 0.1 percent in June 2017 as compared to -0.7 percent in the previous month. It was 1.0 percent in the corresponding month of last year.

1.1 A New Measure of Core Inflation

A new method of permanently excluding relatively volatile commodities from CPI basket in Pakistan has been developed by SBP. This is achieved by making use of trimming approach on past data on monthly CPI changes to isolate a Relatively Stable Component of CPI (RSC-CPI) as a new measure of core inflation. This method ensures inclusion of both food and non-food commodities that show persistent price behavior in Pakistan (see technical notes for details). Developments in core inflation measured by RSC- CPI for the month of June 2017 are described below:

- Core RSC inflation on year-on-year basis is recorded at 4.5 percent in June 2017 as compared to 5.3 percent in the previous month and 4.8 percent during the corresponding month of last year.

11. Core RSC inflation on month-on-month basis is recorded at -0.4 percent in June 2017 compared to 0.3 percent in the previous month and it was 0.4 percent in the corresponding month of last year.

Monthly CPI, WPI and SPI data is summarized in the following table.

Table 1.1 Inflation Trends (percent) (Base 2007- 08 = 100)

Period	CPI Inflation						Core Inflation						WPI Inflation		SPI*** Inflation	
	General		Food		Non-food		NFNE*		Trimmed		RSC**		YoY MoM		YoY MoM	
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
Jun-16	3.2	0.6	2.3	1.4	3.8	0.1	4.6	0.1	3.7	0.2	4.8	0.4	0.2	1.4	1.1	1.0
Jul-16	4.1	1.3	4.7	2.5	3.7	0.5	4.5	0.6	3.6	0.5	4.8	0.6	3.0	2.3	1.7	1.0
Aug-16	3.6	-0.3	3.4	-0.9	3.7	0.2	4.6	0.2	3.5	0.1	4.8	0.2	3.5	0.0	2.0	-0.1
Sep-16	3.9	0.2	4.0	0.1	3.8	0.2	4.8	0.3	3.7	0.1	4.7	0.2	3.4	-0.5	1.6	0.0
Oct-16	4.2	0.8	4.4	0.8	4.1	0.8	5.1	0.9	3.8	0.6	4.9	0.7	2.8	0.0	1.4	0.7
Nov-16	3.8	0.2	3.3	0.2	4.1	0.2	5.3	0.2	3.8	0.2	5.0	0.2	2.6	-0.2	0.6	0.3
Dec-16	3.7	-0.7	3.0	-1.9	4.2	0.2	5.2	0.1	3.7	0.1	4.7	0.2	3.1	-0.1	0.5	-0.4
Jan-17	3.7	0.2	2.6	-1.0	4.4	1.0	5.4	1.1	3.8	0.6	4.9	0.9	4.2	0.5	0.4	-0.6
Feb-17	4.2	0.3	3.7	0.3	4.6	0.3	5.3	0.2	4.1	0.2	4.9	0.2	5.3	0.5	1.6	0.4
Mar-17	4.9	0.8	5.0	1.9	4.9	0.1	5.2	0.1	4.5	0.2	5.0	0.2	6.4	0.7	3.9	2.0
Apr-17	4.8	1.4	4.4	1.7	5.1	1.2	5.5	1.3	4.8	0.8	5.3	1.1	6.0	0.9	2.9	-0.7
May-17	5.0	0.0	4.9	-0.2	5.1	0.2	5.5	0.2	4.8	0.2	5.3	0.3	5.2	-0.2	2.9	-0.7
Jun-17	3.9	-0.4	2.4	-1.1	5.0	0.1	5.5	0.1	4.2	0.0	4.5	-0.4	3.3	-0.5	1.9	0.1

* NFNE is Non-food non-energy ** Relatively Stable Component of CPI *** SPI for all income groups combined

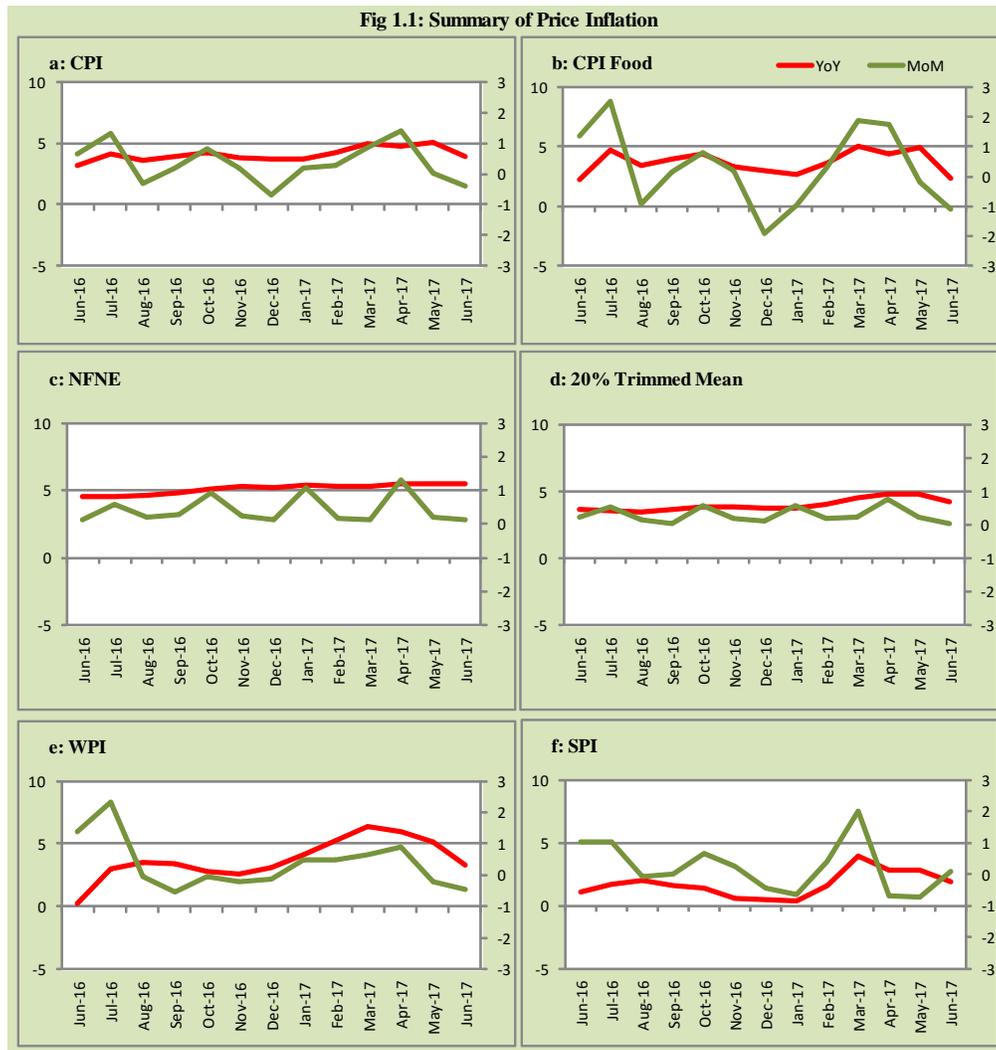


Fig 1.2: Movements in Price Indices (percent)

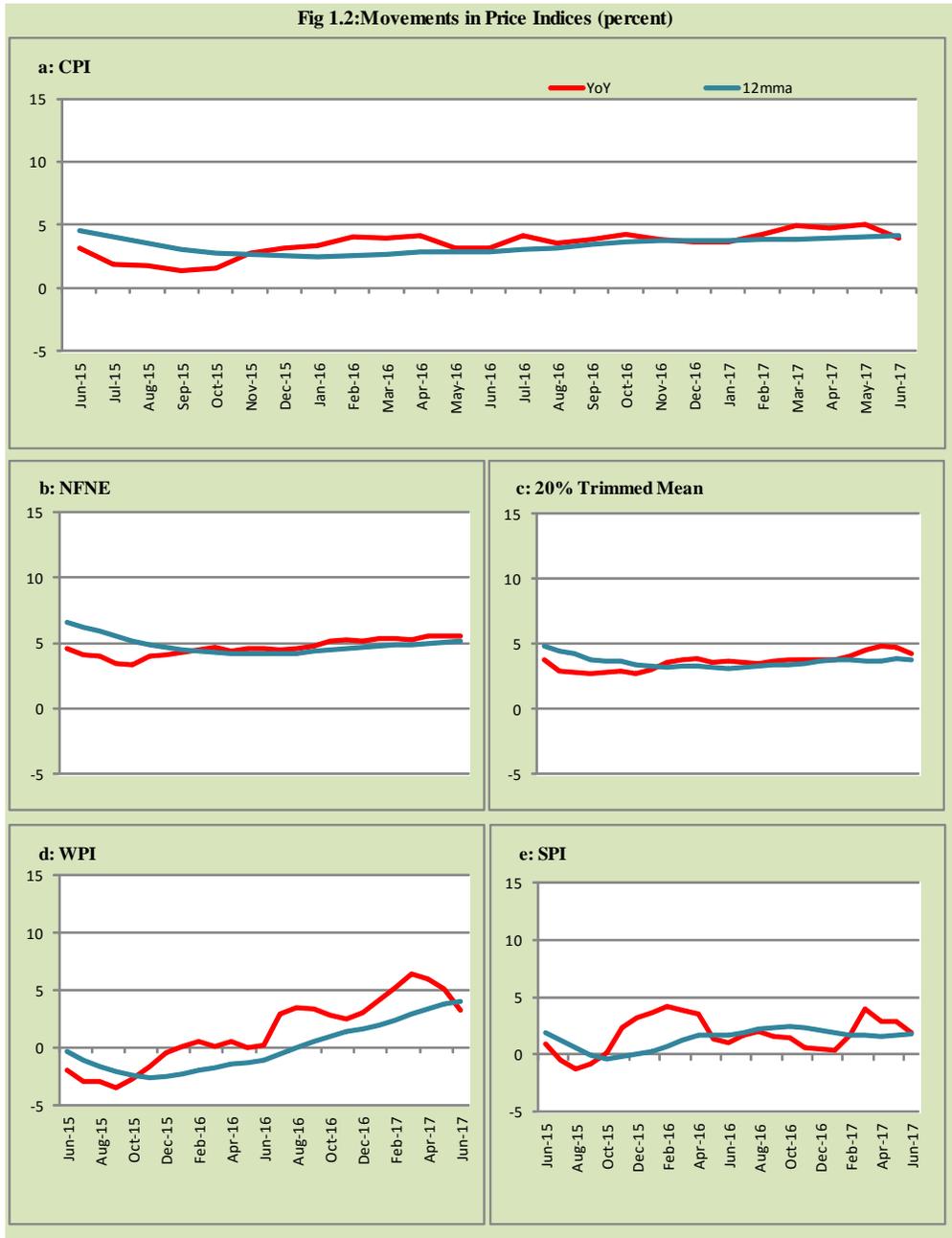
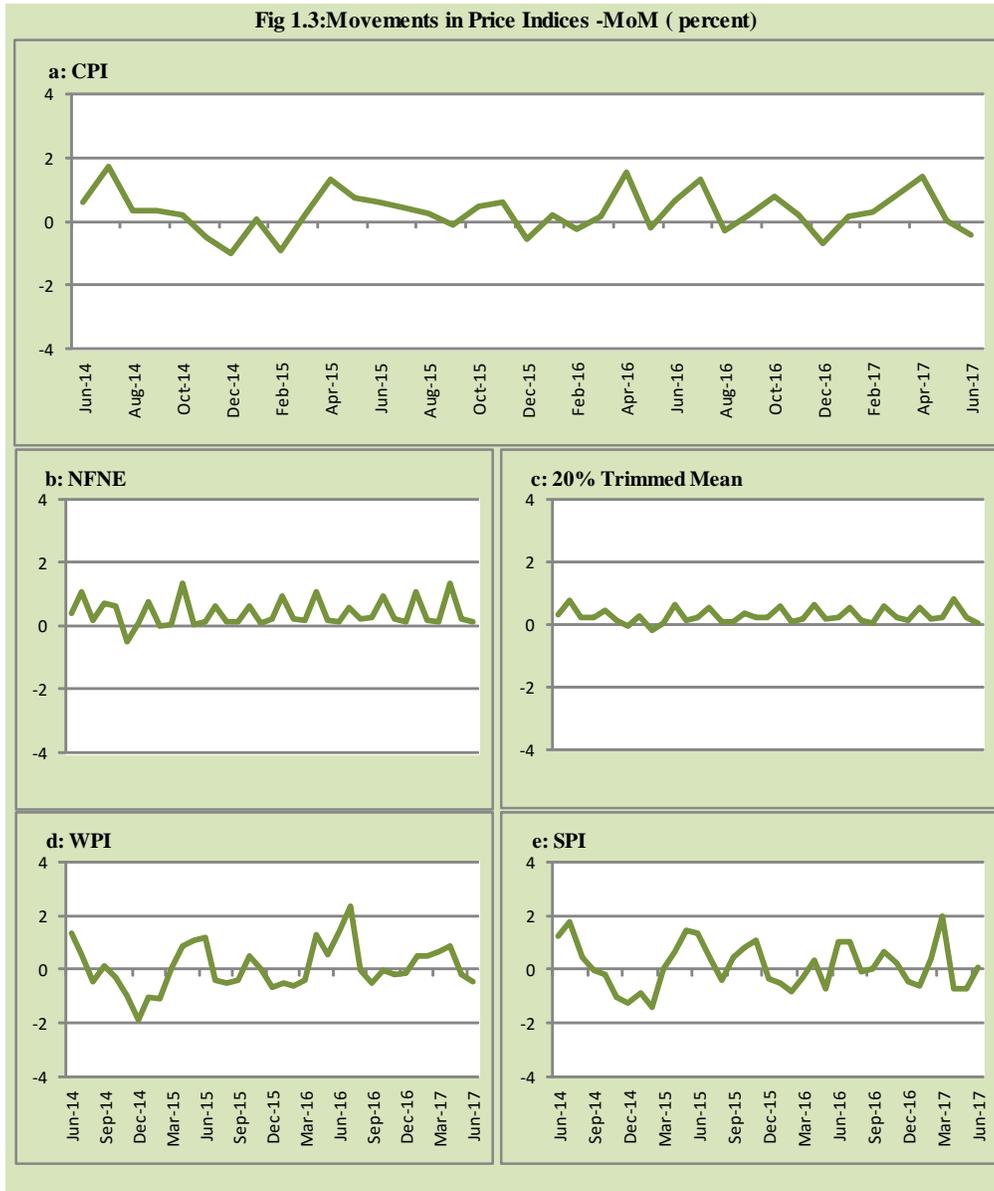
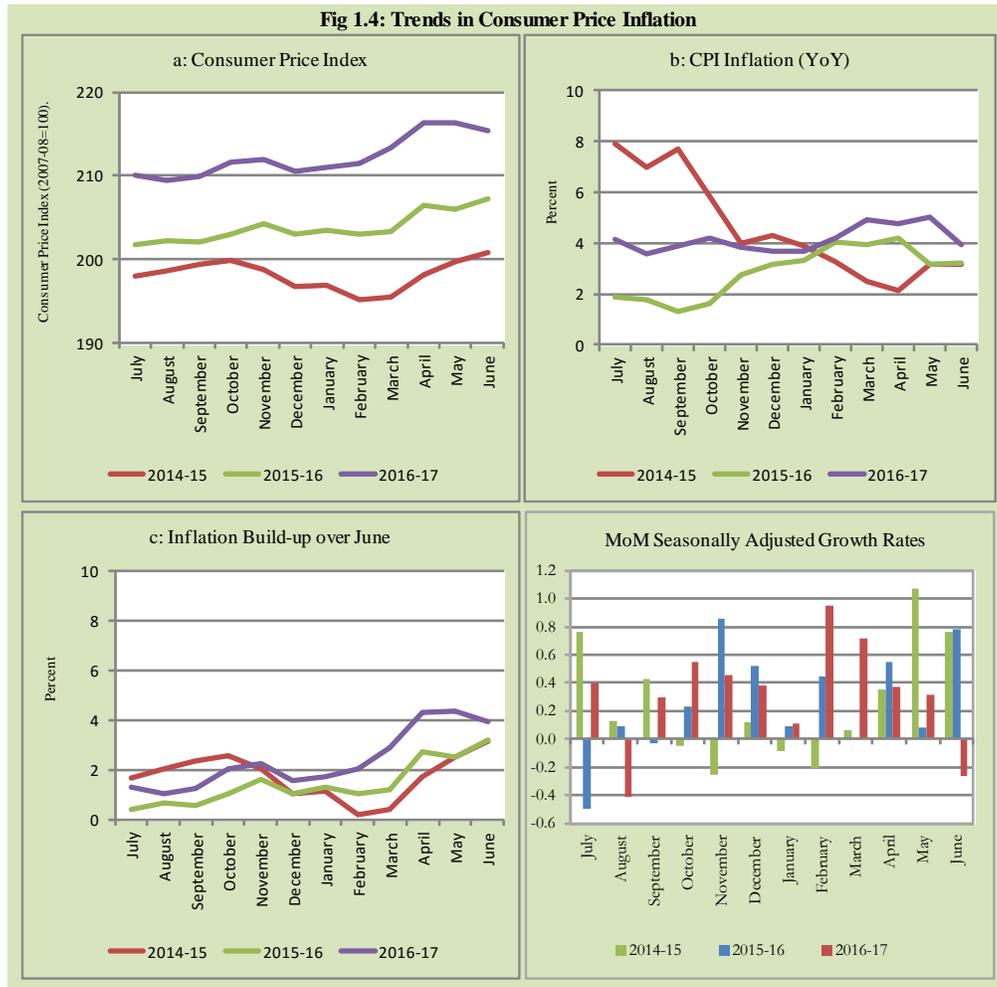


Fig 1.3: Movements in Price Indices -MoM (percent)





2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed mixed trend during June 2017. Among these five cities, the lowest inflation was observed in Karachi at 2.1 percent while the highest inflation was observed in Islamabad at 5.0 percent (Table A6 of annexure-A).

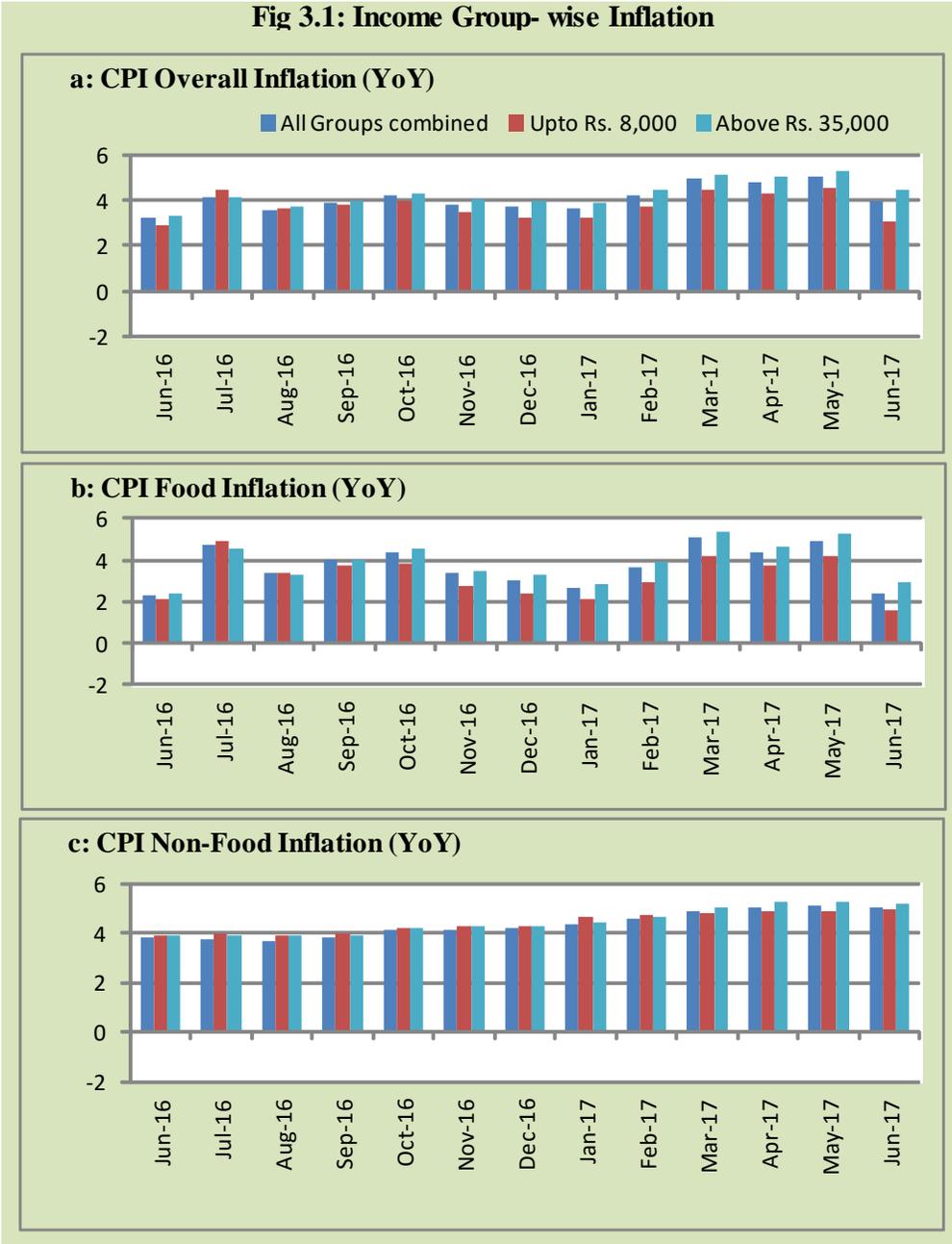
Table 2.1 City-wise Inflation of Selected Cities (percent)						
	Jun-16		May-17		Jun-17	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	0.6	3.2	0.0	5.0	-0.4	3.9
Islamabad	0.4	2.5	-0.1	5.4	0.0	5.0
Karachi	1.6	4.7	0.5	4.4	-0.7	2.1
Lahore	-0.2	0.8	-0.6	5.5	-0.7	4.9
Peshawar	-0.3	1.2	0.2	3.7	-0.8	3.2
Quetta	1.7	2.5	-0.9	3.2	1.2	2.7

3. Income Group wise Inflation

Income group-wise data shows that income group above Rs. 35,000 witnessed higher inflation as compared to other quintiles as well as overall CPI during June 2017 in General, Food and Non-food groups. The lowest income group (Up to Rs. 8, 000) observed lowest inflation in general and food groups among income groups during the month of June 2017 (Table A7 of annexure-A).

Table 3.1 Income Group- wise Inflation (YoY) (percent)									
Income Groups	General			Food			Non-food		
	Jun-16	May-17	Jun-17	Jun-16	May-17	Jun-17	Jun-16	May-17	Jun-17
All Groups Combined	3.2	5.0	3.9	2.3	4.9	2.4	3.8	5.1	5.0
Up to Rs. 8,000	2.9	4.5	3.1	2.1	4.2	1.6	3.9	4.9	5.0
Rs. 8,001- 12,000	3.2	4.6	3.3	2.1	4.5	1.9	4.4	4.8	4.8
Rs. 12,001- 18,000	2.7	4.8	3.4	2.2	4.7	2.0	3.1	4.9	4.9
Rs. 18,001- 35,000	3.3	4.9	3.6	2.3	5.0	2.1	4.1	4.9	4.8
Above Rs. 35,000	3.3	5.3	4.4	2.3	5.3	2.9	3.9	5.3	5.2

Fig 3.1: Income Group- wise Inflation



4. Weighted Contribution

The weighted contribution of food group in the overall inflation decreased to 24.92 percent during June 2017 from 40.46 percent in previous month. It was 29.29 percent in June 2016.

The weighted contribution of non-food group increased to 75.08 percent in June 2017 from 59.54 percent in previous month.

Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
Jun-16	29.90	12.73	43.18	-10.39	9.49	15.09
Jul-16	47.51	9.16	32.21	-7.65	7.07	11.70
Aug-16	39.62	10.36	35.09	-7.91	8.72	14.13
Sep-16	42.70	9.45	29.26	-4.86	10.72	12.72
Oct-16	43.11	8.24	30.79	-4.55	10.57	11.84
Nov-16	36.64	9.16	33.91	-5.95	12.22	14.02
Dec-16	33.90	9.91	35.29	-5.45	12.65	13.70
Jan-17	29.56	9.82	35.77	-4.98	12.73	17.10
Feb-17	35.54	8.29	30.79	0.59	10.97	13.82
Mar-17	41.86	6.08	26.25	5.34	9.03	11.44
Apr-17	37.84	5.94	28.43	5.11	11.07	11.60
May-17	40.46	6.15	27.25	4.96	9.55	11.63
Jun-17	24.92	8.04	34.43	5.77	11.93	14.92

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change

	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17
General	23.7	32.7	39.7	10.3	30.1	41.1	33.5	32.3	38.0	28.5	41.6	35.3	22.4
Food & Non-Alcoholic Beverages	32.7	51.8	34.2	6.1	20.0	28.2	17.9	10.5	35.1	25.7	40.4	27.1	5.3
Alcoholic Beverages & Tobacco	100.0	100.0	33.3	-16.7	-16.7	100.0	83.3	66.7	100.0	33.3	100.0	33.3	0.0
Clothing & Footwear	37.3	42.4	37.3	5.1	54.2	57.6	66.1	45.8	27.1	25.4	45.8	54.2	47.5
Housing, Water, Elect, Gas & other Fuels	33.3	52.8	22.2	5.6	25.0	41.7	38.9	41.7	22.2	0.0	41.7	19.4	13.9
Furnishing & Household Equip. Maintenance etc	8.7	20.3	60.9	11.6	46.4	53.6	47.8	49.3	62.3	44.9	56.5	73.9	42.0
Health	25.6	20.5	46.2	33.3	43.6	46.2	46.2	17.9	33.3	38.5	38.5	17.9	7.7
Transport	-7.0	4.7	27.9	9.3	2.3	7.0	0.0	30.2	30.2	11.6	11.6	11.6	16.3
Communication	25.0	25.0	16.7	8.3	33.3	50.0	25.0	16.7	25.0	50.0	50.0	16.7	33.3
Recreation & Culture	-17.9	-2.6	7.7	10.3	-7.7	25.6	23.1	15.4	30.8	23.1	17.9	12.8	10.3
Education	31.3	-6.3	50.0	37.5	37.5	43.8	0.0	18.8	6.3	12.5	37.5	6.3	12.5
Restaurant & Hotels	50.0	66.7	83.3	50.0	33.3	33.3	50.0	50.0	66.7	83.3	83.3	66.7	66.7
Miscellaneous	51.4	48.6	77.1	-2.9	60.0	71.4	40.0	77.1	60.0	45.7	57.1	57.1	40.0
NFNE	19.8	24.9	42.3	11.5	34.6	45.6	37.6	39.1	37.6	28.1	40.2	38.5	28.4

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

6. Domestic Commodity Prices

Table 6.1 Inflation in Domestic CPI Food Commodities (percent)

Sr. No	Item	Unit	Jun-16		May-17		Jun-17	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	-1.58	-0.05	0.96	-5.35	1.01	0.01
2	Wheat Flour Bag	10 Kg	-2.10	-1.01	-0.06	-1.86	0.18	-0.77
3	Rice Basmati Sup. Qlty.	Kg	-11.02	1.85	14.09	1.83	12.49	0.41
4	Pulse Masoor (Washed)	Kg	8.32	0.81	-14.56	-0.64	-16.11	-1.02
5	Pulse Moong (Washed)	Kg	-3.74	0.11	-17.98	0.38	-18.77	-0.85
6	Pulse Mash (Washed)	Kg	48.10	0.31	-24.48	1.24	-24.82	-0.15
7	Pulse Gram	Kg	49.43	2.20	-5.32	2.35	-8.86	-1.62
8	Vegetable Ghee (Loose)	Kg	-1.21	-0.21	4.12	-0.53	4.31	-0.03
9	Sugar Refined	Kg	4.12	1.18	-6.82	-2.29	-11.01	-3.37
10	Milk Fresh (Unboiled)	Ltr	3.64	0.64	4.58	0.80	3.92	0.00
11	Tea- Tapal Danedar	200 Gm	18.23	0.00	9.14	0.02	9.11	-0.03
12	Beef With Bone Av. Qlty.	Kg	5.07	0.13	4.43	0.87	5.57	1.23
13	Mutton Av. Qlty.	Kg	7.16	0.61	6.79	1.26	7.47	1.25
14	Chicken Farm Broiler (Live)	Kg	-19.58	-6.74	-7.40	-7.73	-5.70	-5.03
15	Eggs Farm	Doz	-4.94	8.50	18.12	-0.91	13.72	4.46
16	Potatoes	Kg	20.13	45.50	70.09	19.88	26.54	8.25
17	Onion	Kg	-31.20	-2.22	-9.58	-10.67	-14.15	-7.17
18	Tomatoes	Kg	-41.53	61.12	59.28	-40.03	8.16	9.41
19	Ginger	Kg	-40.60	1.80	5.03	-1.14	6.46	3.19
20	Garlic	Kg	36.68	-6.21	9.37	-11.62	7.56	-7.77

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Jun-16		May-17		Jun-17	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-18.1	6.0	17.4	-0.1	8.2	-2.3
Food	4.7	3.8	1.1	-1.6	1.2	3.9
Metals	-18.1	-3.5	18.1	-6.4	17.5	-3.9
Energy	-27.2	10.9	28.9	2.5	11.0	-4.4
Agricultural Raw Material	-10.3	-0.1	5.8	-1.4	3.5	-2.3
Cotton	-3.5	1.4	25.6	0.3	26.1	1.8

Source: IMF

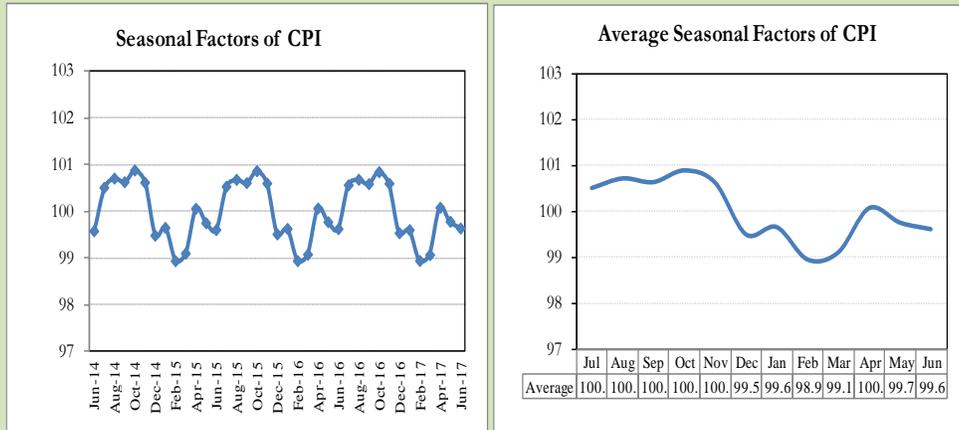
8. Seasonal Adjustment in CPI

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 they 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 Index (CPI) from July 2008 to June 2017 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

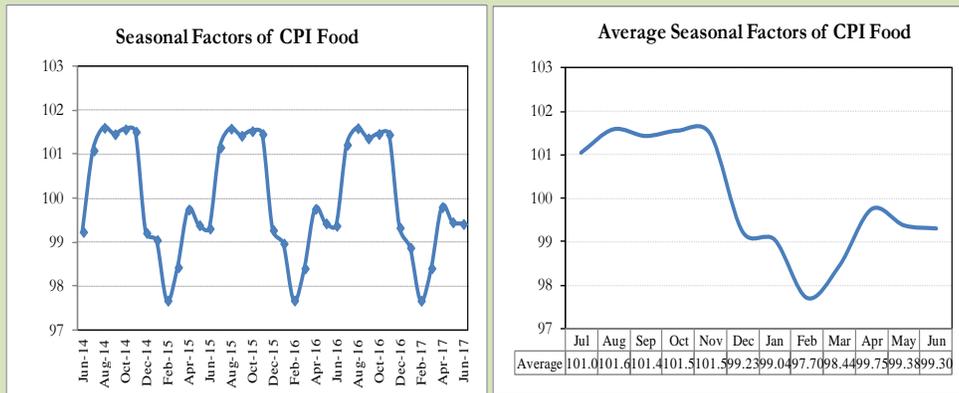
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November and downward seasonality in the remaining months of the year. Upward and downward seasonality is above and below the trend line respectively. It is important to note that seasonal factors are estimates based on present and past experience and that future data may not necessarily show the same pattern of seasonal factors.

Fig. 8.1 Seasonal Factors of CPI



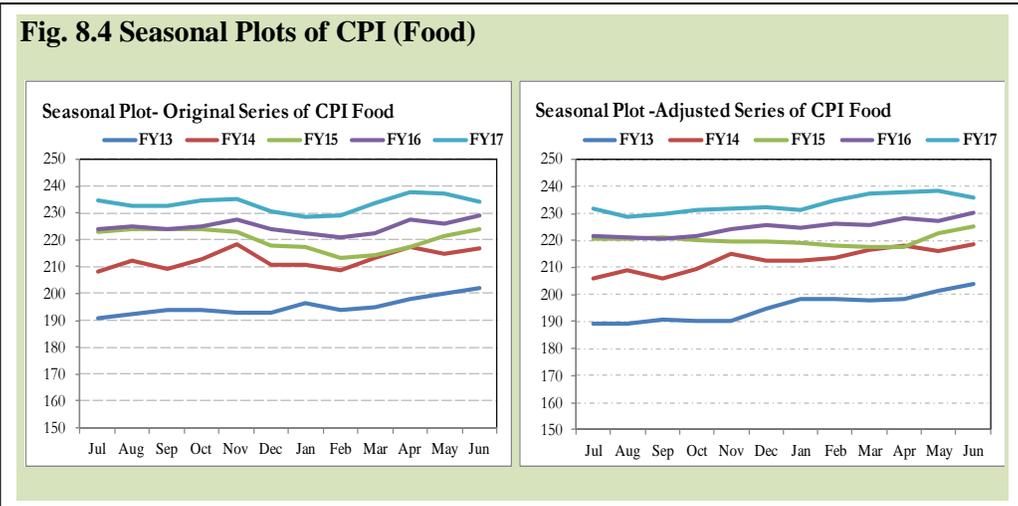
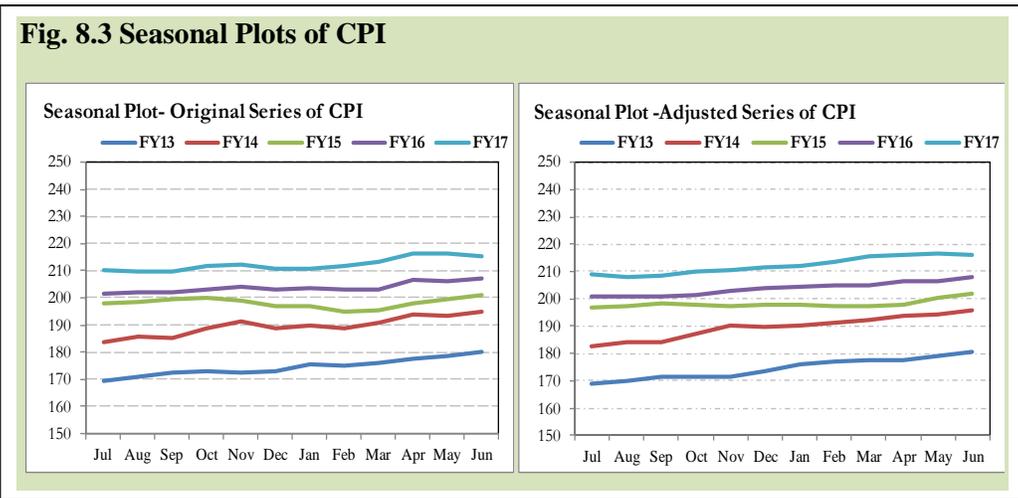
Note: Data Available in Annex Table 16.

Fig. 8.2 Seasonal Factors of CPI Food



Note: Data Available in Annex Table 17.

Figures 8.3 & 8.4 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.



Seasonally adjusted CPI for June 2017 stood at 216.21 against 215.45 in original series showing an increase of 0.76 on account of adjustment of downward seasonality in June 2017.

Seasonally adjusted CPI food group for June 2017 stood at 235.75 against 234.37 in original series showing an increase of 1.38 on account of adjustment of downward seasonality in June 2017.

Month-on-month change of seasonally adjusted CPI series stood at -0.26% reflecting decrease during June 2017 over previous month and a decrease of -0.41% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at -1.07% reflecting decrease during June 2017 over previous month and a decrease of -1.11% in original series.

It is important to note that inflation rates should be analyzed on the basis of seasonally adjusted rates. This is especially needed for inflation rates on month-on-month basis.

The most recent annual rate of inflation is usually indicated by annualizing the seasonally adjusted month-on-month rate. Annualized rate of CPI inflation in June 2017 (corresponding to the seasonally adjusted month-on-month rate) is -3.12 percent.

Fig. 8.5 Month-on-Month Percent Changes in CPI

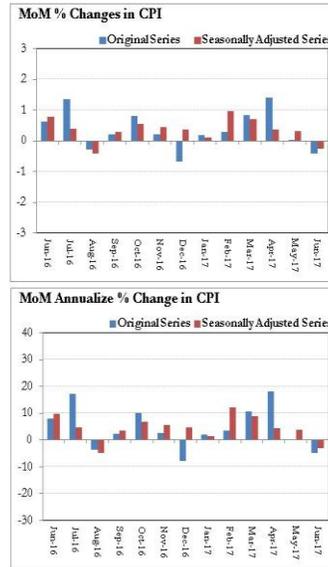
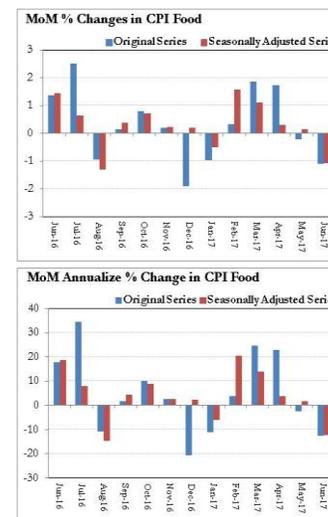


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

	Weight	MoM change			YoY change		
		Jun-16	May-17	Jun-17	Jun-16	May-17	Jun-17
I. Food Group	37.5	1.4	-0.2	-1.1	2.3	4.9	2.4
Food & Non-Alcoholic Beverages	34.8	1.2	-0.3	-0.2	1.2	4.6	3.1
Alcoholic Beverages & Tobacco	1.4	4.2	0.1	-15.3	18.4	10.8	-10.0
Restaurant & Hotels	1.2	0.1	0.5	0.2	5.7	5.4	5.4
II. Non-Food Group	62.5	0.1	0.2	0.1	3.8	5.1	5.0
Clothing & Footwear	7.6	0.5	0.5	0.5	4.9	3.7	3.8
Housing, Water, Elect, Gas & other Fuels	29.4	0.0	0.0	0.0	5.3	5.1	5.1
Furnishing & Household Equip. Maintenance etc	4.2	0.3	0.7	0.2	4.7	2.6	2.4
Health	2.2	0.1	0.1	0.0	5.1	13.5	13.3
Transport	7.2	0.0	0.1	-0.3	-5.2	4.2	3.9
Communication	3.2	0.1	0.0	0.0	0.4	1.6	1.6
Recreation & Culture	2.0	0.0	0.1	0.0	1.4	0.2	0.2
Education	3.9	0.2	0.0	0.0	7.4	11.2	11.0
Miscellaneous	2.8	0.0	0.5	0.3	4.5	5.3	5.7
Headline	100.0	0.6	0.0	-0.4	3.2	5.0	3.9

Groups	% changes	No. of items in each inflation range									
		Total number of items		Decrease or no change (0% or less)		Subdued increase (>0% but <5%)		Moderate increase (5% but less than 10%)		Double digit increase (10% or more)	
		Jun-16	Jun-17	Jun-16	Jun-17	Jun-16	Jun-17	Jun-16	Jun-17	Jun-16	Jun-17
I. Food Group	2.4	126	126	33	34	50	46	21	32	22	14
Food & Non-Alcoholic Beverages	3.1	114	114	33	31	48	44	17	25	16	14
Alcoholic Beverages & Tobacco	-10.0	6	6	0	3	0	1	0	2	6	0
Restaurant & Hotels	5.4	6	6	0	0	2	1	4	5	0	0
II. Non-Food Group	5.0	348	348	93	75	145	184	91	65	19	24
Clothing & Footwear	3.8	59	59	6	8	22	35	28	16	3	0
Housing, Water, Elect, Gas & other Fuels	5.1	36	36	4	11	14	12	15	11	3	2
Furnishing & Household Equip. Maintenance etc	2.4	69	69	3	5	49	55	16	9	1	0
Health	13.3	39	39	16	4	15	21	5	8	3	6
Transport	3.9	43	43	29	25	10	11	4	3	0	4
Communication	1.6	12	12	5	3	4	4	2	3	1	2
Recreation & Culture	0.2	39	39	22	16	12	18	2	4	3	1
Education	11.0	16	16	5	2	3	4	6	5	2	5
Miscellaneous	5.7	35	35	3	1	16	24	13	6	3	4
Overall	3.9	474	474	126	109	195	230	112	97	41	38

Note: Prices of 13 seasonal items were not reported during the month.

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in June 2017					
Top 15 Contributors		Weights	YoY Change		Weighted Contribution
Items/ Contributors	Jun-16		Jun-17		
Ranked by Weighted Contribution					
1	House Rent	21.81	5.73	6.94	32.76
2	Education	3.94	7.38	10.98	11.93
3	Fresh Fruits	1.86	8.57	14.17	8.65
4	Milk Fresh	6.68	3.50	3.84	8.30
5	Meat	2.43	5.78	6.22	4.86
6	Drug Medicine	1.27	3.44	20.33	4.85
7	Motor Fuel	3.03	-12.26	8.92	4.49
8	Rice	1.58	-10.81	13.95	4.23
9	Tea	0.84	10.30	13.51	3.55
10	Potatoes	0.47	20.13	26.54	3.03
11	Tailoring	0.88	7.68	8.56	2.75
12	Fresh Vegetables	1.68	2.44	4.99	2.35
13	Personal Care	1.49	3.98	5.73	2.26
14	Ready Made Food	1.23	5.69	5.45	2.16
15	Personal Equipments	0.84	5.10	6.75	1.98
Total		50.05			98.17
Bottom 15 Contributors					
1	Cigarettes	1.39	18.43	-10.17	-6.29
2	Sugar	1.04	4.12	-11.01	-3.24
3	Pulse Mash (Washed)	0.21	48.10	-24.83	-2.40
4	Chicken	1.36	-19.58	-5.70	-1.84
5	Onion	0.53	-31.20	-14.15	-1.79
6	Pulse Moong	0.23	-3.74	-18.78	-1.61
7	Pulse Masoor	0.27	9.11	-16.08	-1.14
8	Pulse Gram	0.24	49.43	-8.86	-0.82
9	Besan	0.15	41.86	-6.28	-0.35
10	Wheat Flour	4.16	-0.17	-0.33	-0.35
11	Spices	0.54	2.11	-2.03	-0.33
12	Text Books	0.57	0.62	-1.51	-0.31
13	Motor Vehicle Accessories	0.24	-5.48	-1.08	-0.07
14	Sewing Needle & Dry Cell	0.15	4.94	-1.11	-0.04
15	Milk Powder	0.11	4.52	-1.29	-0.04
Total		11.22			-20.62

Table A3.1: Top and Bottom 15 Contributors to CPI Inflation (MoM) in June 2017

Top 15 Contributors				
Items/ Contributors	Weights	MoM Change		Weighted Contribution
		May-17	Jun-17	
Ranked by Weighted Contribution				
1 Potatoes	0.47	19.88	8.25	10.20
2 Meat	2.43	1.00	1.24	9.39
3 Tailoring	0.88	0.83	1.86	5.92
4 Tomatoes	0.44	-40.03	9.40	5.70
5 Eggs	0.46	-0.92	4.46	4.12
6 Beverages	1.20	1.80	1.15	3.52
7 Cotton Cloth	1.73	0.73	0.48	2.16
8 Ready Made Garments	0.97	0.77	0.59	1.59
9 Fresh Fruits	1.86	10.12	0.25	1.59
10 Personal Equipments	0.84	0.31	0.38	1.08
11 Personal Care	1.49	0.70	0.28	1.07
12 Household Textile	0.65	0.27	0.51	0.86
13 Ready Made Food	1.23	0.51	0.17	0.66
14 Rice	1.58	2.01	0.17	0.56
15 Bakery & Confectionary	1.16	0.13	0.19	0.54
Total	17.40			48.95
Bottom 15 Contributors				
1 Cigarettes	1.39	0.14	-15.49	-94.39
2 Fresh Vegetables	1.68	-8.95	-3.18	-15.06
3 Chicken	1.36	-7.72	-5.03	-14.94
4 Sugar	1.04	-2.29	-3.37	-8.46
5 Onion	0.53	-10.67	-7.17	-7.74
6 Wheat Flour	4.16	-1.43	-0.59	-5.77
7 Motor Fuel	3.03	-0.15	-1.01	-5.19
8 Besan	0.15	0.28	-4.02	-2.04
9 Pulse Gram	0.24	2.35	-1.62	-1.28
10 Pulse Masoor	0.27	-0.43	-1.35	-0.75
11 Dry Fruits	0.25	-0.24	-0.77	-0.59
12 Pulse Moong	0.23	0.38	-0.85	-0.56
13 Spices	0.54	0.02	-0.24	-0.35
14 Cooking Oil	1.75	0.12	-0.07	-0.18
15 Wheat Product	0.10	-0.30	-0.76	-0.18
Total	16.74			-157.49

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in June 2017					
Items/ Contributors	Weights	YoY Change		Weighted Contribution	
		Jun-16	Jun-17		
A. Ranked by Percentage Change					
1	Potatoes	0.47	20.13	26.54	3.03
2	Drug Medicine	1.27	3.44	20.33	4.85
3	Fresh Fruits	1.86	8.57	14.17	8.65
4	Rice	1.58	-10.81	13.95	4.23
5	Eggs	0.46	-4.94	13.72	1.26
6	Tea	0.84	10.30	13.51	3.55
7	Education	3.94	7.38	10.98	11.93
8	Motor Fuel	3.03	-12.26	8.92	4.49
9	Tailoring	0.88	7.68	8.56	2.75
10	Tomatoes	0.44	-41.53	8.16	0.54
11	Doctor (Mbbs) Clinic Fee	0.59	7.25	7.87	1.49
12	Honey	0.04	1.45	7.67	0.13
13	Medical Equipments	0.01	3.22	7.56	0.02
14	House Rent	21.81	5.73	6.94	32.76
15	Personal Equipments	0.84	5.10	6.75	1.98
Total		38.07			81.66
B. Ranked by Weights					
1	House Rent	21.81	5.73	6.94	32.76
2	Milk Fresh	6.68	3.50	3.84	8.30
3	Electricity	4.40	2.84	0.00	0.00
4	Wheat Flour	4.16	-0.17	-0.33	-0.35
5	Education	3.94	7.38	10.98	11.93
6	Communication & Apparatus	3.15	0.25	1.45	0.72
7	Motor Fuel	3.03	-12.26	8.92	4.49
8	Transport Services	2.70	-2.13	0.23	0.15
9	Meat	2.43	5.78	6.22	4.86
10	Vegetable Ghee	2.07	-2.19	3.77	1.32
11	Fresh Fruits	1.86	8.57	14.17	8.65
12	Cooking Oil	1.75	-7.05	3.37	0.97
13	Cotton Cloth	1.73	5.45	2.96	1.41
14	Fresh Vegetables	1.68	2.44	4.99	2.35
15	Rice	1.58	-10.81	13.95	4.23
Total		63.00			81.79
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 CPI, which is 3.9 percent in June, 2017.					

Table A3.3: Top Ten Contributors to CPI Food Inflation (YoY) in June 2017					
Items/ Contributors	Weights	YoY Change		Weighted Contribution	
		Jun-16	Jun-17		
A. Ranked by Weighted Contribution					
1	Fresh Fruits	1.86	8.57	14.17	8.65
2	Milk Fresh	6.68	3.50	3.84	8.30
3	Meat	2.43	5.78	6.22	4.86
4	Rice	1.58	-10.81	13.95	4.23
5	Tea	0.84	10.30	13.51	3.55
6	Potatoes	0.47	20.13	26.54	3.03
7	Fresh Vegetables	1.68	2.44	4.99	2.35
8	Ready Made Food	1.23	5.69	5.45	2.16
9	Vegetable Ghee	2.07	-2.19	3.77	1.32
10	Eggs	0.46	-4.94	13.72	1.26
Total		19.30			39.71
B. Ranked by Percentage Change					
1	Potatoes	0.47	20.13	26.54	3.03
2	Fresh Fruits	1.86	8.57	14.17	8.65
3	Rice	1.58	-10.81	13.95	4.23
4	Eggs	0.46	-4.94	13.72	1.26
5	Tea	0.84	10.30	13.51	3.55
6	Tomatoes	0.44	-41.53	8.16	0.54
7	Honey	0.04	1.45	7.67	0.13
8	Meat	2.43	5.78	6.22	4.86
9	Ready Made Food	1.23	5.69	5.45	2.16
10	Gram Whole	0.16	41.44	5.31	0.29
Total		9.52			28.70
C. Ranked by Weights					
1	Milk Fresh	6.68	3.50	3.84	8.30
2	Wheat Flour	4.16	-0.17	-0.33	-0.35
3	Meat	2.43	5.78	6.22	4.86
4	Vegetable Ghee	2.07	-2.19	3.77	1.32
5	Fresh Fruits	1.86	8.57	14.17	8.65
6	Cooking Oil	1.75	-7.05	3.37	0.97
7	Fresh Vegetables	1.68	2.44	4.99	2.35
8	Rice	1.58	-10.81	13.95	4.23
9	Cigarettes	1.39	18.43	-10.17	-6.29
10	Chicken	1.36	-19.58	-5.70	-1.84
Total		24.98			22.20
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 CPI Food, which is 2.4 percent in June, 2017.					

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in June 2017					
Items/ Contributors	Weights	YoY Change		Weighted Contribution	
		Jun-16	Jun-17		
A. Ranked by Weighted Contribution					
1	House Rent	21.81	5.73	6.94	32.76
2	Education	3.94	7.38	10.98	11.93
3	Drug Medicine	1.27	3.44	20.33	4.85
4	Motor Fuel	3.03	-12.26	8.92	4.49
5	Tailoring	0.88	7.68	8.56	2.75
6	Personal Care	1.49	3.98	5.73	2.26
7	Personal Equipments	0.84	5.10	6.75	1.98
8	Doctor (Mbbs) Clinic Fee	0.59	7.25	7.87	1.49
9	Cotton Cloth	1.73	5.45	2.96	1.41
10	Woolen Cloth	0.88	4.41	4.84	1.27
Total		36.47			65.19
B. Ranked by Percentage Change					
1	Drug Medicine	1.27	3.44	20.33	4.85
2	Education	3.94	7.38	10.98	11.93
3	Motor Fuel	3.03	-12.26	8.92	4.49
4	Tailoring	0.88	7.68	8.56	2.75
5	Doctor (Mbbs) Clinic Fee	0.59	7.25	7.87	1.49
6	Medical Equipments	0.01	3.22	7.56	0.02
7	House Rent	21.81	5.73	6.94	32.76
8	Personal Equipments	0.84	5.10	6.75	1.98
9	Cleaning & Laundering	0.21	6.30	6.67	0.44
10	Motor Vehicle	0.66	1.08	6.44	0.87
Total		33.25			61.57
C. Ranked by Weights					
1	House Rent	21.81	5.73	6.94	32.76
2	Electricity	4.40	2.84	0.00	0.00
3	Education	3.94	7.38	10.98	11.93
4	Communication & Apparatus	3.15	0.25	1.45	0.72
5	Motor Fuel	3.03	-12.26	8.92	4.49
6	Transport Services	2.70	-2.13	0.23	0.15
7	Cotton Cloth	1.73	5.45	2.96	1.41
8	Gas	1.58	9.92	0.00	0.00
9	Footware	1.55	1.04	0.64	0.20
10	Personal Care	1.49	3.98	5.73	2.26
Total		45.39			53.92
<p>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 CPI Non-food, which is 5.0 percent in June, 2017.</p>					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: June 2017

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	Pulse Mash (Washed), Pulse Moong (Washed), Brinjal, Pulse Masoor (Washed), Pulse Masoor (Whole), Onion, Sugar Refined, Cardamom Large Loose Av.Q	Milo 200 Gm., Ice Cream Walls, Patties (Vegetables), Vegetable Ghee (Loose), Biscuit-Bakery (Loose), Sweetmeat (Mixed), Cooking Oil (Pakwan), Pastry Av.Qlty	Mango Kalmi, Cardamom Small Av.Qlty, Tapal Danedar Tea 200 Gm, Rice Irri-6/9 (Sindh/Punj), Watermelon (Turbooz), Tea Loose Kenya Av.Qlty 250 Gm, Tomatoes	Apple, Potatoes, Tea Lipton Yellow Label 200 Gm, Lemon, Muskmelon (Kharbooz), Karaila, Rice Basmati Broken Av.Ql, Rice Basmati 385/386, Eggs Farm, Gram Whole Yellow Av.Qlty, Lady Finger, Rice Basmati Sup. Qlty., Coconut Dry Av.Qlty., Bananas
Alcoholic Beverages & Tobacco	Cigarettes Capstan 20,S, Cigarettes Morven Gold 20,S, Cigarettes K-20,S	Betel Leaves,	Betel Nuts, Cigarettes Gold Leaf 20,S	
Clothing & Footwear	Sewing Thread/Reel, Gents Shoe, Art 1109 Servis, Child Shoe Power Lite Bata, Sports Shoes, Ladies Spoung Chappal Bata, Ladies Sandal Bata, Gents Sandal Bata, Gents Spoung Chappal Bata	Georgette Av.Qlty, Awami-Suit W&W (Gents)Av.Qlty, Tropical Suiting Law.Pur, Foot Wear Local (Male), Shoe Repair Half Sole, Secondhand Winter Jacket, Shirt Boy 24"/26" Length, School Uni. Kameez,Shal.Boys	Tailoring Suit (Female), Tailoring Awami-Suit (Male), Heavy Wt Suiting Law.Pur Av. Qlty, Tailoring Charges Pant (Men), Dry Cleaning Suit Coat Pant, Washing Ch. (Kamiz-Shalwar), Frock W/Wear Girls	
Housing, Water, Elect. Gas & other Fuels	Elect.Charges Upto 50 Units, Elect.Charges 01 - 100 Units, Elect.Charges Above 1000 Units, Elect.Charges 301 - 1000 Units, Elect. Charges Overall/ Combined, Gas Chrg Over 100 - 200 Mmbtu	Timber Shesham Log, Electrician Wage Rate(P/Pnt), Kerosene Oil, Bajree, Sand (Black Pit Sand), Plumber Wage Rate, Cement (Local), Electrician Wage Rate(P/Day), Firewood Whole, Synthetic Enemal Robialac	Unskilled Labour Wage Rat, House Rent For Q-Iv, House Rent For Q-II, House Rent For Q-Iii, House Rent For Q-V, House Rent (Combined), House Rent For Q-I, Bricks (New) 1st Class, Mason (Raj) Wage Rate, Water Charges Per House	Iron Bar (M.S. Bar) 1/2", Cement Blocks (6"X8"X12"),
Furnishing & Household Equip. Maintenance etc	Dari Cotton (6X2 1/2"), Match Box (Small), Washing Powder 1000 Grm (Express), Sewing Machine Needle (Singer), Washing Powder (Wheel/Bonus)	Boot Polish Liquid (Cherry), Mattress Single(4"Thick), Pedestal Fan 22" Super Qlty, Quilt (Lihaf) 3 Kg. Cotton, Air Cooler Super Asia, Water Cooler 9/10 Ltr., Lota Plastic (Med Size) Avg. Qlty	Sewing Machine (Singer), Chair Shesham Wood, Robin Blue (35 Gms), Tea Set Pak. China Wear 21 Pcs, Bed Sheet Double With Two Pillow Cover, Boot Polish Cherry/Kiwi 50 Ml	
Health	Saniplast (1 Putty), Galxos-D (450 Gm), Betnesol Eye Drops, Sancos Syrup (50 ML)	Blood Test (Cp) Charges, Sugar Test (Random/Fasting), Disprin Tab., Panadol Tab. Extra/Plain, Brufen Tabs 200-Mg., Glycerine Small Bottle, Ecg Charges, Trisil Tab., Flagyl Tab. 200 Mg.	Cotton Bandage 2" - 4", Doctor (Mbbs) Clinic Fee, Ear Drops (Cardisporine), O.R.S. (Nimcol), Hydryllin Syrup 120 ML, X-Ray (Chest) Charges, Urine Test (Dr) Charges, Thermometer China	Burnol Cream 30 Gm, Lederplex Syrup, Dettol (Medium), Entox Tab., Jouhar Joshanda, Sepran Tablets
Transport	Tyre Motor Cycle Without Tube, Tyre Car With Tube General, Tyre Cycle, Motor Cycle Hero 70 Cc, Platform Ticket, Bus Fare Outside City (Non A/C), Bus Fare Min (Within City)	Tyre Puncture Charges, Cycle Overhauling Charges, Cng, Motor Cycle Service Charges, Auto Rickshaw Fare, Bicycle With Tyres & Tube, Car Service Charges, Full Tonga Charges, Tyre Car W/O Tube	Car Toyota 1300 Cc, Gas Cylinder S.Size (L.P.G), Car Suzuki 800 Cc (W/O. Ac),	Petrol Super, High Speed Diesel Hsd, Car Honda Civic 1500 Cc, Car Suzuki 1000 Cc,
Communication	Postal Envelope Domestic, Telephone Charges Local Call, Telephone Charges Outside City,	Mobile Cell Charges, Postal Envelope For Saudi Arabia, Mobile Set Nokia/Sony/Ericsson Av.Qlty, U.M.S. Reg Charges Min.	Fax Charges (Local), Telephone Set Av. Qlty, Postal Registration Charges	Internet Charges, T.C.S. Ch. Min.Within Zone,
Recreation & Culture	Urdu Book Class Ix/X (T.B.Board), Urdu Book Class V (T.B.Board), English Book Class VI, Maths Book Class Ix Or X, V.C.P. Panasonic/Lg/National, Maths Book Calss V (T.B.Board)	Cinema A/C High Class, Daily "Dawn", Fountain Pen Hero/Wings/China, Pen Ink Dollor 57 Ml Bottle, Personnel Computer (Branded), Paper Fool Scape (27"X17"), Dvd/Vcd Player Panasonic/Lg	Pencil Goldfish/Deer, Daily "Jang", Ball Pen (Local), Daily "Nawa-E-Waqt"	Cinema Non-A/C High Class,
Education	Mba Tuition Fee, Coaching Fee For Class Iv/ X	Pvt Med.College Fee Mbbs(1st Year), Coaching Charges For Class Xi/ Xii Commerce Group, Govt. College Fee Ist. Year, Govt. College Fee 4Th. Year	Pvt School Fee Eng.Med (Class-X), Pvt Eng.Colege Fee (1st Year), I.T. Tuition Fees, Pvt School Fee Eng.Med (Class-I)	Govt. University Fee Msc/ Ma, Govt. Engg. Coll. Fee Ist Year, Govt. Med. College Fee Mbbs 1st Year, Pvt School Fee Eng.Med (Class-Vi), Pvt School Fee Eng.Med (Class-V)
Restaurant & Hotels		Bread Tandoori St. Size	Chicken Biryami Full/Double, Cooked Dal (Av. Hotel), Cooked Mutton (Av. Hotel), Cooked Beef (Av. Hotel)	
Miscellaneous	Shampoo SunsilK/Pantene 100 Ml	Gel Medium Size, Wrist Watch Gents Citizen, Wall Clock Quartz Av.Qlty, Shaving Cream Touch-Me/Admiral, Wrist Watch Ladies Citizen, Gold Tezabi 24 Ct	Silver Tezabi 24 Ct, Toilet Soap Safeguard Bath Size, Shaving Charges, Hair Oil Amla/Chambeli, Haircut Charges For Men, Hair Removing Cream (Eu-Cream)	Toilet Soap Lifebouy 140 Gms, Toothpowder Dentonic 90 Gms, Suitcase Rexin (24"X16"X6"), Artificial Jewellery Set

Table A5: City- wise CPI Inflation by Income Groups, June 2017

	Up to Rs: 8000						Rs 8001- 12000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-0.6	3.1	-2.2	-0.1	1.3	7.0	-0.6	3.6	-2.2	0.1	1.1	7.3
2 Islamabad	-1.0	3.0	-2.1	0.8	0.3	5.6	-0.3	3.8	-2.4	0.6	1.9	7.3
3 Lahore	-1.1	3.5	-2.0	2.7	0.1	4.6	-1.1	4.0	-2.1	2.8	0.1	5.3
4 Gujranwala	-1.1	2.8	-2.4	-0.7	0.6	7.2	-0.6	3.0	-2.1	-0.4	0.9	6.8
5 Sialkot	-1.4	0.1	-2.8	-3.9	0.5	5.3	-1.0	1.0	-2.8	-3.5	0.9	6.2
6 Faisalabad	0.1	4.2	0.2	3.3	0.0	5.3	0.1	4.1	0.2	3.2	0.0	5.2
7 Multan	-0.4	2.9	-0.9	1.4	0.1	4.7	-0.1	3.6	-0.6	1.9	0.4	5.4
8 Sargodha	-1.5	2.5	-2.2	2.5	-0.6	2.4	-1.4	2.6	-2.2	2.7	-0.7	2.4
9 Bahawalpur	-0.5	2.9	-0.9	-0.3	-0.1	6.2	-0.3	4.0	-0.9	-0.2	0.3	8.0
10 Karachi	-0.8	1.5	-1.5	0.1	0.1	3.3	-0.8	1.5	-1.3	0.5	-0.3	2.7
11 Hyderabad	-0.8	3.5	-1.3	1.7	-0.1	6.0	-0.8	2.2	-1.2	2.0	-0.2	2.6
12 Sukkur	0.8	3.4	1.4	3.7	0.1	3.0	0.9	3.5	1.6	3.5	0.2	3.5
13 Larkana	-0.6	1.9	-1.4	0.6	0.3	3.4	-0.9	2.6	-2.3	1.1	0.4	4.0
14 Peshawar	-1.3	2.3	-2.7	1.7	0.3	3.1	-1.2	2.5	-2.7	1.4	0.4	3.5
15 Bannu	0.0	3.6	-0.6	2.2	0.6	5.3	0.1	4.6	-0.2	2.7	0.5	6.5
16 Quetta	1.5	2.0	2.1	-1.0	0.8	5.7	1.2	2.2	1.8	-0.6	0.6	5.4
17 Khuzdar	-0.7	8.2	-1.3	8.6	0.1	7.7	-0.7	8.5	-1.1	8.4	-0.4	8.5
	Rs 12001-18000						Rs 18001-35000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-0.8	3.3	-2.5	0.0	0.7	6.5	-0.7	3.5	-2.9	0.0	0.9	6.3
2 Islamabad	-0.3	3.8	-2.2	0.9	1.6	6.6	-0.2	4.1	-2.3	1.1	1.5	6.7
3 Lahore	-1.0	4.3	-2.3	2.9	0.4	5.9	-0.8	4.6	-2.4	3.1	0.7	6.1
4 Gujranwala	-0.5	3.6	-2.1	-0.1	1.2	7.4	-0.2	3.8	-1.8	0.5	1.2	6.6
5 Sialkot	-0.9	1.2	-2.5	-2.9	0.6	5.5	-0.8	1.3	-2.8	-3.1	1.0	5.2
6 Faisalabad	0.1	4.5	0.1	3.1	0.0	5.8	0.0	4.7	0.1	2.9	-0.1	6.3
7 Multan	0.0	4.3	-0.7	2.2	0.7	6.4	0.1	4.5	-0.5	2.5	0.7	6.2
8 Sargodha	-1.5	3.7	-2.5	2.9	-0.6	4.3	-1.3	4.4	-2.6	2.8	-0.3	5.6
9 Bahawalpur	-0.5	4.0	-1.5	-0.5	0.3	7.9	-0.1	5.5	-1.8	-0.7	1.1	10.2
10 Karachi	-1.0	1.4	-1.4	0.4	-0.7	2.4	-1.1	1.5	-1.6	0.6	-0.6	2.3
11 Hyderabad	-0.4	2.7	-1.2	2.0	0.4	3.4	-0.2	3.0	-1.2	2.3	0.6	3.7
12 Sukkur	0.8	4.0	1.4	3.7	0.2	4.3	0.3	4.3	0.7	4.5	0.0	4.2
13 Larkana	-0.6	3.1	-1.9	1.3	0.4	4.8	-0.6	3.7	-1.8	2.0	0.4	5.1
14 Peshawar	-1.1	2.9	-2.9	1.5	0.6	4.1	-0.9	3.0	-2.9	1.8	0.7	3.9
15 Bannu	0.1	4.4	-0.7	2.5	0.9	6.2	0.3	4.8	-0.6	3.1	1.0	6.1
16 Quetta	1.2	2.4	1.8	-0.4	0.6	5.2	1.1	2.6	1.8	-0.1	0.5	5.0
17 Khuzdar	-0.6	8.2	-1.1	7.7	0.0	8.7	-0.5	7.4	-1.4	6.9	0.2	7.9
	Above Rs 35000						Combined					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-0.4	4.1	-2.3	1.0	0.4	5.5	-0.5	3.8	-2.5	0.5	0.7	6.1
2 Islamabad	0.0	5.1	-1.6	2.6	0.8	6.4	0.0	5.0	-1.7	2.3	1.2	7.0
3 Lahore	-0.5	5.5	-1.8	4.5	0.2	6.1	-0.7	4.9	-2.1	3.6	0.4	6.0
4 Gujranwala	0.2	4.6	-0.4	2.0	0.6	6.0	-0.2	3.8	-1.6	0.6	0.7	6.2
5 Sialkot	-0.5	1.9	-1.9	-2.4	0.2	4.1	-0.7	1.4	-2.5	-2.9	0.5	4.6
6 Faisalabad	0.0	5.1	0.1	2.9	-0.1	6.3	0.0	4.6	0.1	3.1	-0.1	5.7
7 Multan	0.3	5.9	0.0	3.4	0.5	7.3	0.1	4.8	-0.5	2.5	0.5	6.5
8 Sargodha	-1.1	6.4	-2.7	3.4	-0.4	7.7	-1.3	4.3	-2.5	2.9	-0.5	5.1
9 Bahawalpur	0.1	7.8	-0.2	1.3	0.3	10.8	-0.1	5.5	-1.1	-0.1	0.4	9.0
10 Karachi	-0.5	2.5	-1.0	1.6	-0.2	3.0	-0.7	2.1	-1.2	1.1	-0.3	2.8
11 Hyderabad	0.3	3.9	-0.3	3.9	0.6	3.9	-0.2	4.4	-1.0	2.5	0.4	5.8
12 Sukkur	0.1	4.5	0.3	4.7	0.0	4.4	0.5	4.0	1.0	4.2	0.2	3.9
13 Larkana	-0.5	4.9	-1.7	3.7	0.0	5.4	-0.6	3.2	-2.0	1.5	0.2	4.3
14 Peshawar	-0.5	3.7	-2.3	2.8	0.3	4.2	-0.8	3.2	-2.8	1.9	0.5	4.0
15 Bannu	0.0	6.1	-1.0	2.2	0.6	8.1	0.1	4.7	-0.7	2.6	0.7	6.1
16 Quetta	1.2	3.3	2.6	1.5	0.5	4.2	1.2	2.7	2.2	0.2	0.5	4.4
17 Khuzdar	-0.7	7.3	-1.2	7.4	-0.4	7.2	-0.6	8.0	-1.3	7.7	-0.2	8.2

Table A6: City- wise CPI Inflation (YoY) June, 2017

City	High inflation cities			City	Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Turbat	8.6	4.1	11.3	Rawalpindi	3.8	0.5	6.1
Khuzdar	8.0	7.7	8.2	Gujranwala	3.8	0.6	6.2
Mianwali	7.0	-1.6	12.7	Attock	3.6	1.6	5.0
Gawadar	6.3	2.7	8.8	Larkana	3.2	1.5	4.3
Vehari	6.0	1.7	9.2	Peshawar	3.2	1.9	4.0
Mingora	6.0	4.1	7.1	Mirpur Khas	3.1	3.9	2.6
Rahim Yar Khan	5.9	5.4	6.2	Muzaffargarh	2.9	1.7	3.8
Bahawalpur	5.5	-0.1	9.0	Jhang	2.7	0.0	4.4
Sahiwal	5.3	4.6	5.8	Quetta	2.7	0.2	4.4
Islamabad	5.0	2.3	7.0	Mithi	2.4	2.7	2.3
Lahore	4.9	3.6	6.0	Jhelum	2.2	0.2	3.6
Multan	4.8	2.5	6.5	Karachi	2.1	1.1	2.8
Loralai & Cantt	4.7	1.9	6.6	Wazirabad	1.9	-0.6	3.7
Bannu	4.7	2.6	6.1	Sialkot	1.4	-2.9	4.6
Faisalabad	4.6	3.1	5.7	Mardan	1.4	2.0	1.1
Dera Mrd.Jamali	4.5	4.7	4.4	D. G. Khan	0.6	-1.5	2.0
Abbottabad	4.4	5.9	3.4	Nawabshah	0.1	0.0	0.1
Hyderabad	4.4	2.5	5.8				
Dadu	4.3	5.4	3.5				
Sargodha	4.3	2.9	5.1				
D. I. Khan	4.2	2.5	5.3				
Bahawalnagar	4.1	-0.1	7.0				
Sukkur	4.0	4.2	3.9				

Note: High inflation refers to equal or above average inflation, and low inflation refers to below average

Table A7: Income Group-wise Inflation (percent)						
	MoM			YoY		
	Jun-16	May-17	Jun-17	Jun-16	May-17	Jun-17
<u>Up to Rs. 8000</u>						
General	0.9	-0.3	-0.5	2.9	4.5	3.1
Food	1.5	-0.6	-1.0	2.1	4.2	1.6
Non-food	0.1	0.2	0.1	3.9	4.9	5.0
<u>Rs. 8001- 12000</u>						
General	0.8	-0.2	-0.5	3.2	4.6	3.3
Food	1.5	-0.5	-1.0	2.1	4.5	1.9
Non-food	0.1	0.2	0.1	4.4	4.8	4.8
<u>Rs. 12001- 18000</u>						
General	0.8	-0.1	-0.5	2.7	4.8	3.4
Food	1.5	-0.4	-1.2	2.2	4.7	2.0
Non-food	0.1	0.2	0.1	3.1	4.9	4.9
<u>Rs. 18001- 35000</u>						
General	0.7	0.0	-0.5	3.3	4.9	3.6
Food	1.4	-0.3	-1.3	2.3	5.0	2.1
Non-food	0.1	0.2	0.1	4.1	4.9	4.8
<u>Above Rs. 35000</u>						
General	0.5	0.1	-0.3	3.3	5.3	4.4
Food	1.2	0.1	-1.0	2.3	5.3	2.9
Non-food	0.1	0.2	0.1	3.9	5.3	5.2
<u>All income groups</u>						
General	0.6	0.0	-0.4	3.2	5.0	3.9
Food	1.4	-0.2	-1.1	2.3	4.9	2.4
Non-food	0.1	0.2	0.1	3.8	5.1	5.0

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices	Percentage change	
			Jun-17	YoY	MoM
1	Wheat	10Kg.	323.7	-0.1	-0.7
2	Wheat Flour Bag	10Kg.	366.8	-1.3	-1.1
3	Rice Basmati Broken	Kg.	68.8	15.5	0.7
4	Rice Irri-6	Kg.	49.7	6.8	0.0
5	Bread Plain Med. Size (340-400 Gm.)	Each	41.1	0.7	0.0
6	Beef	Kg.	335.0	3.7	0.8
7	Mutton	Kg.	687.7	7.1	0.9
8	Chicken Live (Farm)	Kg.	152.7	-5.1	-4.2
9	Milk Fresh	Litr	81.4	2.2	0.2
10	Curd	Kg.	97.1	4.1	0.8
11	Milk Powdered Nido	500G	363.7	-4.9	-1.3
12	Egg Hen (Farm)	Doz.	90.4	16.2	3.5
13	Mustard Oil	Kg.	181.5	0.5	0.0
14	Cooking Oil (Tin)	2.5Ltr	469.6	3.4	0.5
15	Veg. Ghee (Tin)	2.5Kg.	462.5	3.9	0.5
16	Veg. Ghee Loose	Kg.	144.8	4.4	-0.3
17	Bananas	Doz.	115.4	14.6	30.5
18	Masoor Pulse Washed	Kg.	127.4	-16.3	-0.1
19	Moong Pulse Washed	Kg.	127.9	-19.4	-1.1
20	Mash Pulse Washed	Kg.	193.2	-29.2	-0.4
21	Gram Pulse Washed	Kg.	129.1	-10.2	-1.8
22	Potatoes	Kg.	38.1	27.3	9.5
23	Onions	Kg.	29.0	-7.1	-1.6
24	Tomatoes	Kg.	44.4	9.7	47.4
25	Sugar	Kg.	56.5	-12.3	-3.4
26	Gur	Kg.	84.3	-5.5	0.9
27	Salt Powdered Loose (Lahori)	Kg.	10.7	2.3	0.0
28	Red Chilies Powder Loose	Kg.	263.5	-5.4	-0.2
29	Garlic	Kg.	212.3	12.4	-7.3
30	Tea (Yellow Label)	200Gm.	203.7	29.0	0.0
31	Cooked Beef Plate	Each	93.5	2.9	0.0
32	Cooked Dal Plate	Each	56.9	2.8	0.0
33	Tea Prepared (Sada)	Cup	20.8	6.0	0.0
34	Cigarettes K-2 (20'S)	20'S	56.5	-8.7	-16.1
35	Long Cloth (Coarse Latha)	Mtr.	210.0	2.2	1.2
36	Shirting	Mtr.	168.1	2.3	0.8
37	Lawn	Mtr.	255.8	1.8	0.2
38	Georgette (Voil Printed)	Mtr.	125.2	1.4	0.2
39	Sandal Gents Bata	Pair	699.0	0.0	0.0
40	Chappal Spong. Bata (Gents)	Pair	179.1	0.0	0.0
41	Sandal Ladies Bata	Pair	502.4	0.0	0.0
42	Electric Charges 1-50	Unit	2.0	0.0	0.0
43	Gas Charges upto 3.3719	Mmbtu	128.7	0.3	0.0
44	Kerosene	Litr	78.8	5.3	0.0
45	Firewood	40Kg	609.1	2.0	0.0
46	Energy Savor 14 Watts	Each	167.8	0.0	0.0
47	Washing Soap (200-250 Gm.)	Cake	25.9	3.5	0.0
48	Match Box	Each	2.2	5.7	0.0
49	Petrol	Litr	73.3	12.6	-2.1
50	Diesel	Litr	82.3	12.0	-2.0
51	L.P.G.(11 Kg Cylinder.)	Each	987.1	5.7	-2.9
52	Tele. Local Call	Call	3.9	0.0	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	41.4	14.6	2.0
Maximum				29.0	47.4
Median				2.2	0.0
Minimum				-29.2	-16.1

Table A9: Distribution of Price Changes (YoY) - WPI Items: June 2017				
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	Hides And Fur Skins,Raw, Sorghum/Jowar, Millet/Bajra, Pulses, Sugar Crops, Poultry, Maize, Dry Fruits, Wheat, Vegetables	Fish Live Fresh Or Chilled, Milk From Bovine Animals, Stimulant And Spice Crops, Raw Animal Material/Wool	Other Oil Seeds, Fuel Wood In Logs, Cotton Seeds	Edible Roots/Potatos, Fibre Crops, Unmanufactured Tobacco, Fresh Fruits, Rice, Eggs
Ores & Minerals, Electricity Gas & Water	Coal Not Agglomerated, Salt & Pure Sodium Chloride, Electrical Energy	Natural Gas Liquefied		
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Tobacco Products, Sugar Refined, Other Cereal Flour, Nylon Yarn, Oil Cakes, Wheat Flour, Silk And Reyon Fabrics, Chocolate, Spices, Beverages, Fruit Juices, Other Leather N.E.C, Leather With Out Hairs	Quilts, Dairy Products N.E.C, Vegetable Ghee, Towels, Blended Yarn, Vegetable Oil Refined, Footwears, Other Fabrics, Blankets, Mineral Water, Synthetic Carpets, Cotton Fabrics, Ready Made Garments, Other Food Products, Bed Sheets, Milk And Cream In Solid Form	Hosiery Products, Woolen Carpets, Sugar Confectionary, Vegetables & Fruit Juices, Processed Liquid Milk, Meat Of Animals	Cotton Yarn, Coffee And Tea, Woven Fabrics, Dried Fruits & Nuts, Ice Cream
Other Transportable Goods except Metal Products, Machinery and Equipments	Fertilizers, Chemicals, Pesticides, Auto Tyres, Plastic Products, Printing Paper, Paints & Varnishes, Coke, Dying Materials	Insecticised, Hard Board, Soaps & Detergent, Cement, Mobil Oil, Kerosine Oil, Bed Foams, Ceramics And Sanitary, Bricks Blocks And Tiles	Medicines, Matches, Timber	Glass Sheets, Furnace Oil, Diesel Oil, Motor Sprit, Other Glass Articles
Metal Product Machinery & Equipment	Cultivators, Tractors, Air Conditioners, Motor Cycles, Pig Iron, Concrete Mixer, Bicycles	Electrical Wires, Chuff Cutter, Steel Products, Lighting Equipments	Steel Bars & Sheets, Vacuum Pumps, Engines And Motors, Refrige,Wash& Sew Mach,Iron,Fan, Motor Vehicales, Radio And Television	Lathe Machines, Pipe Fittings

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities

Items and specification	Weights	Index		
		Jun-16	May-17	Jun-17
General	100.00	207.30	216.33	215.45
Food & Non-Alcoholic Beverages.	34.83	222.39	229.65	229.18
1 Wheat	0.35	190.65	192.57	192.58
2 Wheat Flour	4.16	207.51	208.05	206.83
3 Wheat Product	0.10	213.52	216.02	214.38
4 Besan	0.15	304.78	297.62	285.65
5 Rice	1.58	156.23	177.72	178.03
6 Cereals	0.16	248.23	255.14	254.31
7 Bakery & Confectionary	1.16	213.83	217.90	218.31
8 Nimco	0.46	248.02	254.27	254.89
9 Meat	2.43	261.83	274.72	278.12
10 Chicken	1.36	193.47	192.12	182.45
11 Fish	0.30	218.30	216.86	217.81
12 Milk Fresh	6.68	263.49	273.61	273.62
13 Milk Product	0.63	254.37	261.79	262.51
14 Milk Powder	0.11	236.54	234.48	233.49
15 Egg	0.46	163.75	178.26	186.21
16 Mustard Oil	0.10	153.99	159.76	159.86
17 Cooking Oil	1.75	133.28	137.86	137.77
18 Vegetable Ghee	2.07	137.43	142.61	142.61
19 Dry Fruits	0.25	263.76	266.15	264.11
20 Fresh Fruits	1.86	266.67	303.71	304.46
21 Pulse Masoor	0.27	213.02	181.21	178.77
22 Pulse Moong	0.23	299.89	245.68	243.58
23 Pulse Mash (Washed)	0.21	376.13	283.17	282.75
24 Pulse Gram	0.24	318.34	294.91	290.14
25 Gram Whole	0.16	273.48	288.70	287.99
26 Beans	0.03	234.45	234.22	235.22
27 Potatoes	0.47	198.22	231.71	250.82
28 Onion	0.53	192.54	178.05	165.29
29 Tomatoes	0.44	122.20	120.81	132.17
30 Fresh Vegetable	1.68	228.83	248.13	240.24
31 Sugar	1.04	229.80	211.63	204.50
32 Gur	0.02	274.05	258.77	261.06
33 Honey	0.04	307.78	331.39	331.39
34 Sweet Meet	0.25	241.30	250.10	251.16
35 Beverages	1.20	220.83	224.56	227.14
36 Jam, Tomato Ketchup & Pickle	0.25	215.33	217.79	218.46
37 Condiments	0.27	262.42	269.19	269.13
38 Spices	0.54	241.18	236.86	236.29
39 Tea	0.84	255.87	289.90	290.45
Alcoholic Beverages, Tobacco	1.41	360.75	383.32	324.60
40 Cigarette	1.39	362.72	385.57	325.84
41 Betel Leaves & Nuts	0.02	241.34	246.77	249.57
Clothing & Footwear	7.57	229.34	236.71	237.99
42 Cotton Cloth	1.73	224.62	230.16	231.26
43 Woolen Cloth	0.88	244.55	256.11	256.38
44 Ready Made Garment	0.97	236.72	244.95	246.39
45 Woolen Readymade Garments	0.40	252.98	258.38	258.35
46 Hosiery	0.51	241.98	246.87	247.18
47 Dopatta	0.44	240.75	244.48	244.81
48 Cleaning & Laundering	0.21	253.34	269.30	270.23

Items and specification	Weights	Index		
		Jun-16	May-17	Jun-17
49 Tailoring	0.88	296.54	316.04	321.93
50 Footwear	1.55	166.36	167.13	167.43
Housing, Water, Elect, Gas & Other Fuel	29.41	187.17	196.70	196.71
51 House Rent	21.81	176.44	188.68	188.68
52 Construction Input Item	0.56	244.53	250.49	251.12
53 Construction Wage Rate	0.33	228.82	240.32	240.47
54 Water Supply	0.50	161.60	171.58	171.58
55 Electricity	4.40	238.10	238.10	238.10
56 Gas	1.58	158.08	158.08	158.08
57 Kerosene Oil	0.01	193.53	198.42	200.60
58 Fire Wood Whole	0.23	284.87	290.23	290.23
Furnished H.Hold Equip.& Maint. Etc	4.21	221.48	226.42	226.80
59 Furniture	0.33	211.58	217.87	218.43
60 Household Textile	0.65	221.22	227.19	228.35
61 Household Equipment	0.59	178.21	182.03	182.57
62 Utensils	0.32	222.56	231.84	232.11
63 Plastic Products	0.25	207.23	210.84	210.85
64 Washing Soap & Detergent	0.79	226.76	231.44	231.80
65 Sewing Needle & Dry Cell	0.15	208.80	206.48	206.48
66 Household Servant	1.04	248.71	253.47	253.47
67 Marriage Hall Charges	0.08	244.63	248.67	248.67
Health	2.19	187.68	212.65	212.66
68 Drug Medicine	1.27	153.48	184.67	184.69
69 Medical Equipment	0.01	233.55	251.21	251.21
70 Doctor (MBBS) Clinic Fee	0.59	260.45	280.95	280.95
71 Medical Test	0.32	187.65	196.52	196.52
Transport	7.20	169.34	176.43	175.87
72 Motor Vehicle	0.66	165.17	175.12	175.81
73 Motor Vehicle Accessories	0.24	213.88	211.92	211.58
74 Motor Fuel	3.03	135.58	149.18	147.67
75 Mechanical Service	0.46	224.68	230.37	230.82
76 Motor Vehicle Tax	0.11	210.18	210.18	210.18
77 Transport Services	2.70	193.15	193.59	193.59
Communication	3.22	130.85	132.87	132.91
78 Postal Services	0.07	239.48	249.29	250.18
79 Communication & Apparatus	3.15	128.57	130.42	130.44
Recreation & Culture	2.02	195.70	196.12	196.15
80 Recreation & Culture	0.86	128.89	129.73	129.73
81 Text Books	0.57	292.41	287.98	287.98
82 News Papers	0.19	175.49	181.01	181.16
83 Stationery	0.40	211.89	215.94	215.98
Education	3.94	224.60	249.23	249.26
84 Education	3.94	224.60	249.23	249.26
Restaurants And Hotels	1.23	263.41	277.29	277.76
85 Ready Made Food	1.23	263.41	277.29	277.76
Miscellaneous Goods And Services	2.76	233.42	245.99	246.71
86 Personal Care	1.49	215.09	226.79	227.42
87 Cosmetics	0.39	199.77	204.76	204.96
88 Blades	0.03	195.16	197.80	197.80
89 Personal Equipments	0.84	282.68	300.63	301.76

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities

Items and Specifications	Index		
	Jun-16	May-17	Jun-17
General	210.88	218.78	217.77
Agriculture Forestry & Fishery	239.12	252.57	255.41
1 Wheat	202.00	199.84	197.88
2 Maize	204.06	193.75	194.40
3 Rice	146.08	164.78	166.29
4 Sorghum/Jowar	283.56	211.32	211.32
5 Millet/Bajra	198.98	160.16	163.48
6 Vegetables	246.21	244.61	241.83
7 Fresh Fruits	305.11	319.44	362.37
8 Dry Fruits	247.44	236.56	236.63
9 Cotton Seeds	263.29	277.04	277.99
10 Other Oil Seeds	170.50	181.57	181.04
11 Edible Roots/ Potatoes	177.50	232.84	271.09
12 Stimulant And Spice Crops	218.56	208.56	221.79
13 Pulses	293.16	269.80	266.71
14 Sugar Crops	286.34	268.94	268.94
15 Fibre Crops	180.30	218.63	219.02
16 Unmanufactured Tobacco	243.77	290.42	291.25
17 Poultry	203.67	205.02	192.50
18 Milk From Bovine Animals	258.97	268.56	268.56
19 Eggs	165.23	178.14	182.17
20 Raw Animal Material/Wool	174.27	176.86	176.22
21 Hides And Fur Skins, Raw	150.46	106.42	106.42
22 Fuel Wood In Logs	264.77	279.63	279.63
23 Fishes Live Fresh Or Chilled	445.91	466.43	466.43
Ores/Minerals, Gas & Elect.	244.28	241.85	241.61
24 Coal Not Agglomerated	160.78	155.29	155.29
25 Natural Gas Liquefied	208.42	208.89	208.46
26 Salt & Pure Sodium Chloride	252.31	254.38	246.13
27 Electrical Energy	293.09	288.00	288.00
Food, Beverages, Tobacco, Textiles	218.71	227.51	227.73
28 Meat Of Animals	274.34	288.83	291.67
29 Vegetables & Fruit Juices	208.33	223.21	224.14
30 Dried Fruits & Nuts	238.46	267.71	268.30
31 Fruit Juices	181.90	181.68	181.82
32 Vegetable Oil Refined	151.97	154.94	155.51
33 Vegetable Ghee	121.87	126.11	126.16
34 Oil Cakes	232.54	227.54	227.93
35 Processed Liquid Milk	250.18	264.31	266.86
36 Milk And Cream In Solid Form	219.30	218.36	219.35
37 Ice Cream	233.72	261.28	261.28
38 Dairy Products N.E.C	248.26	255.13	258.19
39 Wheat Flour	192.23	191.32	189.57
40 Other Cereal Flour	284.71	252.55	247.19
41 Sugar Refined	245.61	214.13	210.04
42 Chocolate	101.06	100.00	100.00
43 Sugar Confectionary	118.83	128.44	128.44
44 Coffee And Tea	230.07	264.11	263.86
45 Spices	190.22	189.72	189.72
46 Other Food Products	292.52	294.51	294.01
47 Mineral Water	195.81	198.57	198.57
48 Beverages	172.44	172.03	172.03
49 Tobacco Products	435.03	445.85	318.37
50 Cotton Yarn	175.50	203.16	203.44
51 Nylon Yarn	147.08	143.99	143.99
52 Blended Yarn	176.75	182.28	182.11
53 Woven Fabrics	279.69	316.28	316.28
54 Cotton Fabrics	209.07	211.60	211.60
55 Other Fabrics			

Inflation Monitor, June 2017

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities				
		Index		
Items and Specifications		Jun-16	May-17	Jun-17
56	Silk And Rayon Fabrics	222.56	227.16	227.16
57	Towels	191.10	188.89	188.89
58	Blankets	267.20	276.14	276.14
59	Bed Sheets	243.93	247.52	247.52
60	Quilts	256.29	256.87	256.87
61	Woolen Carpets	195.68	203.79	203.79
62	Synthetic Carpets	181.55	196.43	196.43
63	Hosiery Products	129.25	130.95	130.95
64	Ready Made Garments	222.52	243.31	243.31
65	Leather With Out Hairs	199.39	197.19	201.37
66	Other Leather N.E.C	221.97	221.97	221.97
67	Footwear's	207.31	207.31	207.31
Other Transportable Goods		164.46	171.76	170.67
68	Timber	220.36	231.53	231.53
69	Printing Paper	166.34	165.63	165.67
70	Hard Board	212.50	220.83	220.83
71	Coke	163.45	163.45	163.45
72	Motor Sprit	108.54	124.98	122.95
73	Diesel Oil	136.30	156.91	155.08
74	Kerosene Oil	115.11	117.12	117.12
75	Furnace Oil	76.28	99.91	98.32
76	Mobil Oil	196.00	201.29	201.29
77	Chemicals	178.23	173.01	172.93
78	Dying Materials	146.55	146.55	146.55
79	Fertilizers	250.41	218.85	216.40
80	Pesticides	312.37	304.43	304.43
81	Insecticides	135.64	141.71	141.88
82	Paints & Varnishes	295.36	294.51	294.51
83	Medicines	162.48	174.00	174.00
84	Soaps & Detergent	184.58	191.14	191.14
85	Auto Tyres	181.25	177.07	177.07
86	Plastic Products	228.35	225.88	225.88
87	Glass Sheets	231.30	298.97	298.97
88	Other Glass Articles	281.73	317.24	317.24
89	Ceramics And Sanitary	231.59	233.92	233.92
90	Bricks Blocks And Tiles	218.86	220.73	220.73
91	Cement	208.51	214.78	215.12
92	Bed Foams	167.67	170.00	170.00
93	Matches	162.62	171.36	171.36
Metal Product Machinery & Equip		172.48	176.43	176.73
94	Pig Iron	128.97	128.97	128.97
95	Steel Bars & Sheets	125.30	135.13	136.91
96	Pipe Fittings	193.63	215.66	215.66
97	Steel Products	176.99	177.56	177.56
98	Engines And Motors	109.24	116.98	116.98
99	Vacuum Pumps	114.95	123.69	123.69
100	Air Conditioners	201.18	200.10	200.10
101	Cultivators	219.76	190.66	190.66
102	Chuff Cutter	149.20	153.46	153.46
103	Tractors	205.43	201.75	201.75
104	Lathe Machines	208.81	241.06	241.06
105	Concrete Mixer	138.83	138.83	138.83
106	Refrige,Wash& Sew Mach, Iron,Fan	201.88	214.75	214.85
107	Electrical Wires	195.19	204.51	204.51
108	Lighting Equipments	170.34	170.73	170.73
109	Radio And Television	133.46	140.42	140.42
110	Motor Vehicles	185.25	191.39	195.36
111	Motor Cycles	125.89	125.89	125.89
112	Bicycles			

Table A12: Price Indices - Base 2007-08 = 100

Period	CPI			WPI			SPI *	
	Overall	Food	Non-food	Overall	Food	Non-Food		
2008-09	117.03	123.12	113.38	118.93	119.68	118.45	123.26	
2009-10	128.85	139.05	122.73	135.40	136.85	134.48	139.84	
2010-11	146.45	164.10	135.87	164.17	159.26	167.28	164.02	
2011-12	162.57	182.20	150.80	181.28	181.32	181.26	178.67	
2012-13	174.53	195.18	162.16	194.61	197.21	192.95	189.64	
2013-14	189.58	212.74	175.69	210.48	213.04	208.85	208.66	
2014-15	198.16	220.20	184.95	209.85	226.22	199.47	212.61	
2015-16	203.82	224.78	191.25	207.64	234.69	190.47	216.23	
2016-17								
2015	Feb	195.13	213.15	184.33	203.86	222.26	192.19	206.98
	Mar	195.57	214.25	184.37	203.89	222.11	192.33	207.05
	Apr	198.16	217.26	186.71	205.65	225.38	193.13	208.42
	May	199.66	221.22	186.74	207.92	228.09	195.12	211.48
	Jun	200.89	223.84	187.13	210.37	232.39	196.40	214.29
	Jul	201.76	224.14	188.35	209.53	233.68	194.20	215.13
	Aug	202.25	224.86	188.70	208.42	236.00	190.92	214.33
	Sep	202.04	223.87	188.95	207.60	234.37	190.61	215.23
	Oct	203.03	224.86	189.95	208.69	234.47	192.34	217.02
	Nov	204.22	227.55	190.23	208.72	232.83	193.43	219.37
	Dec	203.06	223.90	190.57	207.37	230.72	192.55	218.60
	2016	Jan	203.49	222.58	192.05	206.27	231.14	190.48
Feb		202.98	221.07	192.14	205.05	231.26	188.42	215.73
Mar		203.28	222.25	191.91	204.22	231.43	186.95	215.13
Apr		206.43	227.53	193.78	206.87	237.05	187.72	215.88
May		205.99	225.84	194.09	208.01	238.62	188.59	214.35
Jun		207.30	228.95	194.32	210.88	244.68	189.44	216.58
Jul		210.08	234.69	195.33	215.81	251.76	192.99	218.81
Aug		209.46	232.48	195.66	215.75	250.12	193.95	218.66
Sep		209.88	232.80	196.14	214.61	250.41	191.89	218.67
Oct		211.57	234.68	197.72	214.53	250.63	191.64	220.11
Nov		212.01	235.17	198.13	214.07	247.89	192.62	220.68
Dec		210.57	230.69	198.51	213.76	244.40	194.32	219.73
2017	Jan	210.94	228.45	200.44	214.84	244.73	195.87	218.35
	Feb	211.54	229.19	200.96	215.86	244.91	197.42	219.25
	Mar	213.32	233.47	201.24	217.29	247.53	198.10	223.62
	Apr	216.30	237.50	203.59	219.22	252.45	198.13	222.07
	May	216.33	237.01	203.94	218.78	251.10	198.26	220.51
	Jun	215.45	234.37	204.11	217.77	248.90	198.02	220.68

*: all groups combined

Table A13: International Commodity Prices/ Indices				
	Mar-17	Apr-17	May-17	Jun-17
Energy				
Crude Oil (US\$ per barrel) *	50.9	52.2	49.9	46.1
IMF Energy Index (2005 = 100)	96.0	98.4	94.0	88.2
WB Energy Index (2010 = 100) @	65.3	67.1	64.3	60.4
Food				
Rice (\$/MT)	367.8	374.5	402.9	444.7
Wheat (\$/MT)	146.4	138.4	146.5	157.2
Sugar (US cent/ pound)	18.1	16.4	15.7	13.7
Palm Oil (\$/MT)	663.3	623.2	655.5	621.2
Soybean Oil (\$/MT)	723.4	695.3	714.1	704.8
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	86.8	87.0	88.6	84.8
IMF Metal Price Index (2005 = 100)	149.4	139.9	134.4	132.4
Copper (\$/MT)	5,824.6	5,683.9	5,599.6	5,719.8
Aluminum (\$/MT)	1,901.5	1,921.2	1,913.0	1,885.3
Iron Ore (\$ cents/dry MT)	87.2	70.4	61.6	57.9
Tin (\$/MT)	19,875.2	19,910.3	20,200.3	19,658.8
Nickel (\$/MT)	10,204.7	9,609.3	9,155.1	8,931.8
Zinc (\$/MT)	2,776.9	2,614.9	2,590.2	2,573.4
Lead (\$/MT)	2,280.9	2,220.6	2,125.1	2,132.9
Uranium (\$/MT)	24.6	23.2	21.6	19.7
DAP (\$/MT)	375.0	366.0	357.0	350.0
Urea (\$/MT)	234.0	205.0	180.0	185.0
Source: IMF and World Bank				
\$/MT = US\$ per metric ton.				
* 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 May 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16.2/				
DAP: Diammonium Phosphate				
@ World Bank commodity index for low and middle income countries				

Table 14: CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY13	FY14	FY15	FY16	FY17
Jul	169.57	183.58	198.05	201.76	210.08
Aug	171.09	185.71	198.70	202.25	209.46
Sep	172.44	185.18	199.40	202.04	209.88
Oct	173.10	188.82	199.81	203.03	211.57
Nov	172.42	191.21	198.79	204.22	212.01
Dec	172.82	188.68	196.79	203.06	210.57
Jan	175.70	189.60	196.95	203.49	210.94
Feb	175.11	189.00	195.13	202.98	211.54
Mar	175.82	190.82	195.57	203.28	213.32
Apr	177.74	194.06	198.16	206.43	216.30
May	178.65	193.55	199.66	205.99	216.33
Jun	179.94	194.74	200.89	207.30	215.45
Seasonally Adjusted Series					
Jul	168.88	182.71	197.03	200.68	208.89
Aug	169.86	184.35	197.29	200.87	208.03
Sep	171.31	184.00	198.14	200.80	208.64
Oct	171.54	187.14	198.05	201.27	209.78
Nov	171.36	189.98	197.55	202.98	210.74
Dec	173.74	189.67	197.80	204.04	211.53
Jan	176.22	190.23	197.62	204.23	211.76
Feb	176.93	191.00	197.21	205.14	213.78
Mar	177.32	192.50	197.33	205.16	215.31
Apr	177.65	193.94	198.03	206.28	216.11
May	179.17	194.07	200.14	206.44	216.79
Jun	180.71	195.55	201.67	208.06	216.21

Table 15: CPI Food Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY13	FY14	FY15	FY16	FY17
Jul	190.72	208.19	222.80	224.14	234.69
Aug	192.47	212.27	224.05	224.86	232.48
Sep	193.80	209.09	224.12	223.87	232.80
Oct	193.66	212.61	223.74	224.86	234.68
Nov	193.03	218.16	222.74	227.55	235.17
Dec	192.97	210.89	218.08	223.90	230.69
Jan	196.58	210.81	217.10	222.58	228.45
Feb	194.05	208.74	213.15	221.07	229.19
Mar	195.06	213.11	214.25	222.25	233.47
Apr	197.74	217.33	217.26	227.53	237.50
May	200.00	214.75	221.22	225.84	237.01
Jun	202.11	216.98	223.84	228.95	234.37
Seasonally Adjusted Series					
Jul	189.14	206.15	220.40	221.57	231.87
Aug	189.44	208.89	220.51	221.35	228.83
Sep	190.91	206.06	220.90	220.73	229.67
Oct	190.46	209.24	220.28	221.48	231.30
Nov	190.15	214.85	219.42	224.28	231.81
Dec	194.60	212.63	219.81	225.54	232.25
Jan	198.15	212.71	219.19	224.90	231.05
Feb	198.51	213.63	218.23	226.33	234.66
Mar	198.04	216.42	217.67	225.85	237.25
Apr	198.29	217.89	217.82	228.08	237.98
May	201.45	216.21	222.58	227.14	238.31
Jun	203.77	218.65	225.39	230.39	235.75

Table 16: CPI Monthly & Average Seasonal Factors						
Period	FY13	FY14	FY15	FY16	FY17	Average
Jul	100.41	100.48	100.52	100.54	100.57	100.50
Aug	100.73	100.74	100.71	100.69	100.69	100.71
Sep	100.66	100.64	100.64	100.62	100.60	100.63
Oct	100.91	100.90	100.89	100.87	100.85	100.88
Nov	100.62	100.65	100.63	100.61	100.60	100.62
Dec	99.47	99.48	99.49	99.52	99.54	99.50
Jan	99.71	99.67	99.66	99.64	99.61	99.66
Feb	98.97	98.95	98.95	98.95	98.95	98.95
Mar	99.16	99.13	99.11	99.09	99.08	99.11
Apr	100.05	100.06	100.07	100.07	100.09	100.07
May	99.71	99.73	99.76	99.78	99.79	99.75
Jun	99.58	99.59	99.61	99.63	99.65	99.61

Table 17: CPI Food Monthly & Average Seasonal Factors						
Period	FY13	FY14	FY15	FY16	FY17	Average
Jul	100.83	100.99	101.09	101.16	101.22	101.06
Aug	101.60	101.62	101.60	101.59	101.60	101.60
Sep	101.51	101.47	101.46	101.42	101.36	101.45
Oct	101.68	101.61	101.57	101.53	101.46	101.57
Nov	101.52	101.54	101.51	101.46	101.45	101.50
Dec	99.17	99.18	99.21	99.27	99.33	99.23
Jan	99.21	99.11	99.05	98.97	98.87	99.04
Feb	97.75	97.71	97.67	97.67	97.67	97.70
Mar	98.50	98.47	98.43	98.41	98.41	98.44
Apr	99.72	99.74	99.75	99.76	99.80	99.75
May	99.28	99.33	99.39	99.43	99.45	99.38
Jun	99.19	99.24	99.31	99.37	99.42	99.30

Table 18: CPI Month-on-Month % Change Original & Seasonally Adjusted					
Original Series					
Period	FY13	FY14	FY15	FY16	FY17
Jul	-0.25	2.02	1.70	0.43	1.34
Aug	0.90	1.16	0.33	0.24	-0.30
Sep	0.79	-0.29	0.35	-0.10	0.20
Oct	0.38	1.97	0.21	0.49	0.81
Nov	-0.39	1.27	-0.51	0.59	0.21
Dec	0.23	-1.32	-1.01	-0.57	-0.68
Jan	1.67	0.49	0.08	0.21	0.18
Feb	-0.34	-0.32	-0.92	-0.25	0.28
Mar	0.41	0.96	0.23	0.15	0.84
Apr	1.09	1.70	1.32	1.55	1.40
May	0.51	-0.26	0.76	-0.21	0.01
Jun	0.72	0.61	0.62	0.64	-0.41
Seasonally Adjusted Series					
Jul	-1.07	1.11	0.76	-0.49	0.40
Aug	0.58	0.90	0.13	0.09	-0.41
Sep	0.85	-0.19	0.43	-0.03	0.29
Oct	0.14	1.71	-0.04	0.23	0.55
Nov	-0.11	1.52	-0.25	0.85	0.45
Dec	1.39	-0.16	0.12	0.52	0.38
Jan	1.43	0.29	-0.09	0.09	0.11
Feb	0.40	0.40	-0.21	0.44	0.95
Mar	0.22	0.79	0.06	0.01	0.71
Apr	0.19	0.75	0.35	0.55	0.37
May	0.86	0.07	1.07	0.08	0.32
Jun	0.86	0.76	0.76	0.79	-0.26

Table 19: CPI Food Month-on-Month % Change Original & Seasonally Adjusted					
Original Series					
Period	FY13	FY14	FY15	FY16	FY17
Jul	1.80	3.01	2.68	0.13	2.50
Aug	0.92	1.96	0.56	0.32	-0.94
Sep	0.69	-1.50	0.03	-0.44	0.14
Oct	-0.07	1.68	-0.17	0.44	0.81
Nov	-0.33	2.61	-0.45	1.20	0.21
Dec	-0.03	-3.33	-2.09	-1.61	-1.90
Jan	1.87	-0.04	-0.45	-0.59	-0.97
Feb	-1.29	-0.98	-1.82	-0.68	0.32
Mar	0.52	2.10	0.52	0.54	1.87
Apr	1.37	1.98	1.41	2.38	1.73
May	1.15	-1.19	1.82	-0.74	-0.21
Jun	1.05	1.04	1.18	1.38	-1.11
Seasonally Adjusted Series					
Jul	0.09	1.17	0.80	-1.69	0.64
Aug	0.16	1.33	0.05	-0.10	-1.31
Sep	0.77	-1.35	0.18	-0.28	0.37
Oct	-0.24	1.55	-0.28	0.34	0.71
Nov	-0.16	2.68	-0.39	1.26	0.22
Dec	2.34	-1.03	0.18	0.56	0.19
Jan	1.83	0.04	-0.28	-0.28	-0.52
Feb	0.18	0.43	-0.44	0.64	1.56
Mar	-0.24	1.31	-0.26	-0.21	1.10
Apr	0.12	0.68	0.07	0.99	0.31
May	1.59	-0.77	2.19	-0.41	0.14
Jun	1.15	1.13	1.26	1.43	-1.07



Figure A2: Frequency Distribution of Price Changes of CPI Items, June 2017

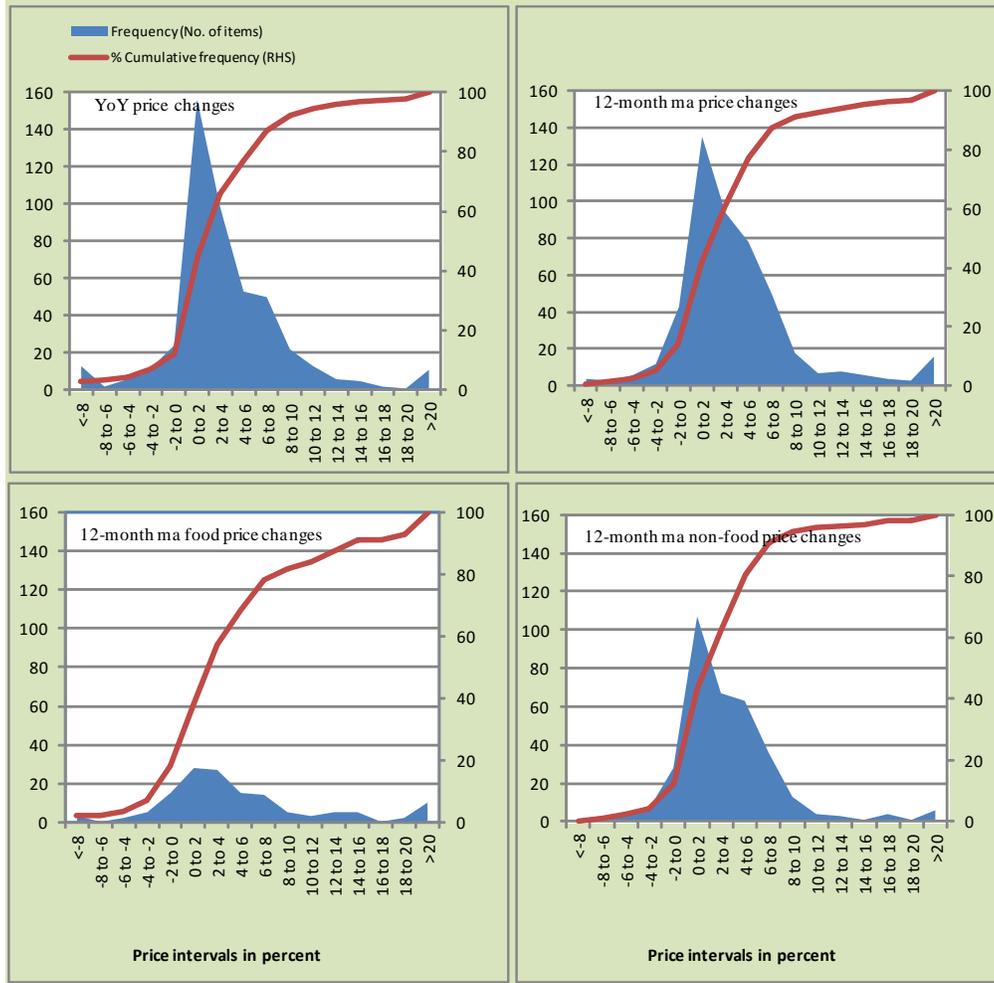


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, June 2017

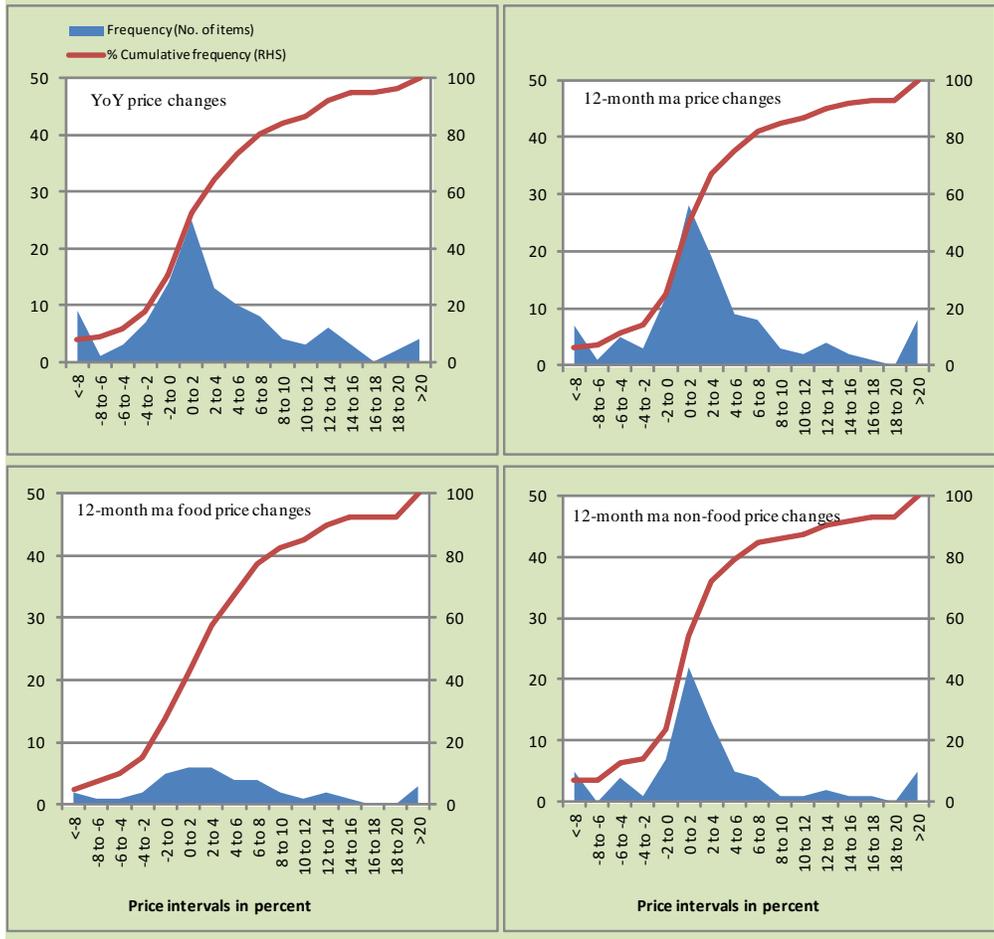
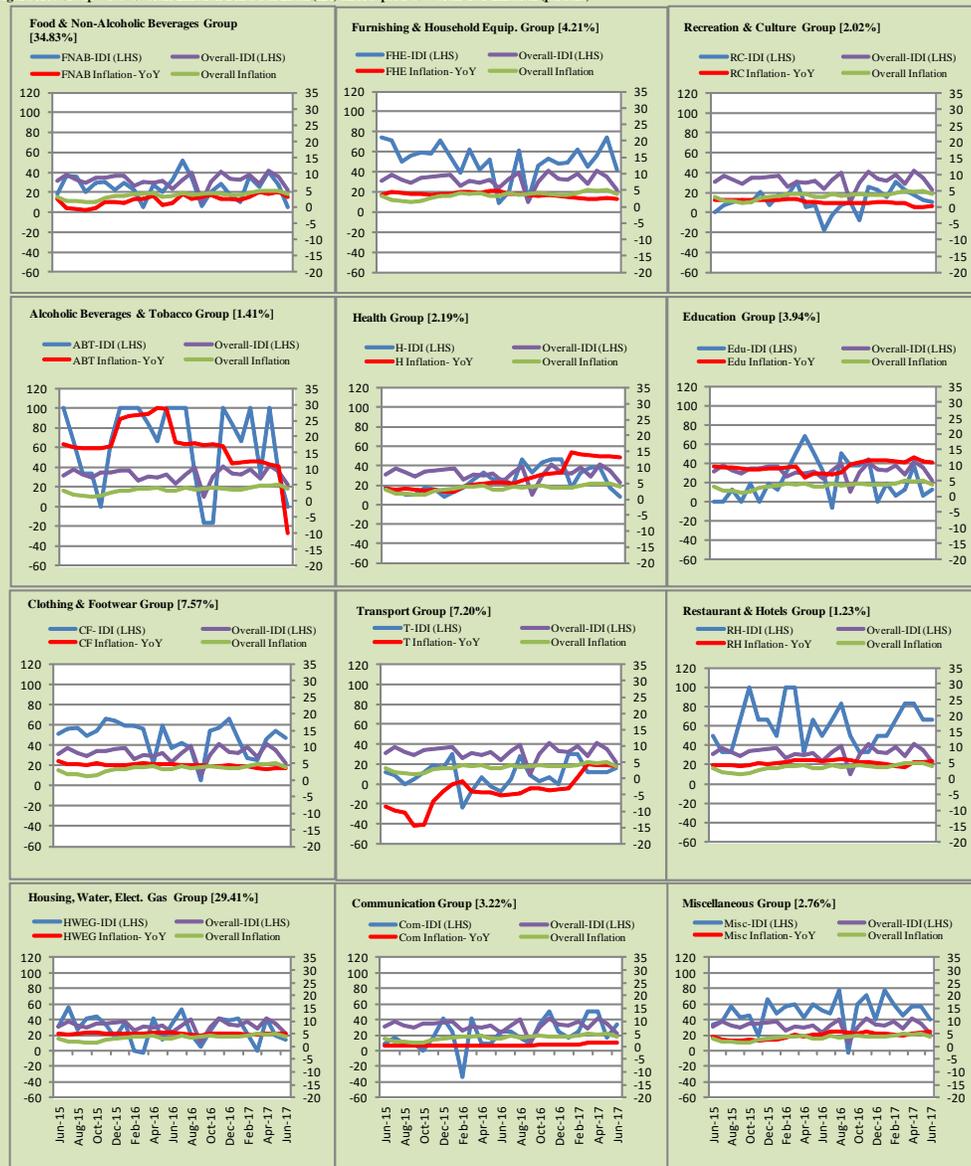


Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



Numbers in square brackets show the weights of respective groups in the CPI baskets.

Annexure B

Technical Notes

1. All the three measures of inflation, viz. CPI, 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 2007-08.
3. CPI basket contains 487 consumers' goods; WPI basket contains 463 items; SPI contains 53 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.
 - c) Relatively Stable Component of CPI (RSC-CPI) developed by State Bank of Pakistan is a hybrid method based on permanent exclusion criteria. Volatile price items, to be excluded in the newly proposed measure RSC-CPI, are identified by analyzing the list and frequency of commodities that have been trimmed frequently in the past while computing monthly weighted trimmed mean measure. Commodities

that were trimmed out 13 and above times since July 2008 to February 2013 are selected for permanently excluding from the CPI basket. This newly developed component includes a mix of both food and non-food commodities that show persistent price behavior. Fifty Commodities included comprise relatively stable component (RSC-CPI) with a weight of 67.69. The detailed methodology of RSC-CPI and group wise items along their weights can be viewed at the following link;

<http://www.sbp.org.pk/publications/wpapers/2013/wp66.pdf>

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

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

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 487 commodities of the CPI basket. It is based on month-on-month (MoM) change in the prices of these commodities and can be obtained by estimating what is known as an ‘inflation diffusion index’ (IDI) as below:

$$\frac{\text{Number of Commodities with } \uparrow \text{ in MoM change} - \text{Number of Commodities with } \downarrow \text{ in MoM change}}{\text{Number of Commodities for which prices are reported}}$$

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 commodities for which prices have altered or remained constant¹.

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

¹ We do not observe the prices of certain commodities (like the seasonal items) during certain periods of time. To calculate the inflation diffusion index we consider the commodities 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.