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## STATISTICAL RELEASE

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### EXPORT AND IMPORT PRICE INDICES (XMPI) FOR JUNE, 2018

#### Background notes

#### Definition

The Export and Import Price Indices (XMPI) are measures of price changes of goods imported into or exported outside the country. The XMPI are used to analyse Terms of Trade (ToT) which is the ratio of Export Price Index (XPI) to the Import Price Index (MPI).

The Export and Import Price Index (XMPI) covers both exports and imports of merchandise trade. These quarterly specification-based XMPI have been compiled and disseminated since the first quarter of 2013 up to the last quarter 2017 with reference base period of March quarter 2013. The updated XMPI has the fourth quarter of 2017 as the reference base period. The updating of the weights and the product sample for the XMPI used customs data for the years 2014 to 2016. Initiation of price collection for the updated XMPI was carried out during the period October-December 2017. This allows for the compilation of the XMPI for the fourth quarter of 2017 using the new product and enterprise samples.

#### Weights and a reference period

The XMPI weights are based on values of imported and exported commodities for the years 2014 to 2016. A top-down approach was taken in the determination of the index structure, composition and the allocation of the weights. The aim was to maximize the indirect representation of un-priced commodities in the index, through a chain of representation. The price reference period is the quarter ending December 2017.

## Product Classification

The products are classified according to the United Nations Harmonized Commodity Description and Coding System (HS). The HS is an international nomenclature for the classification of products.

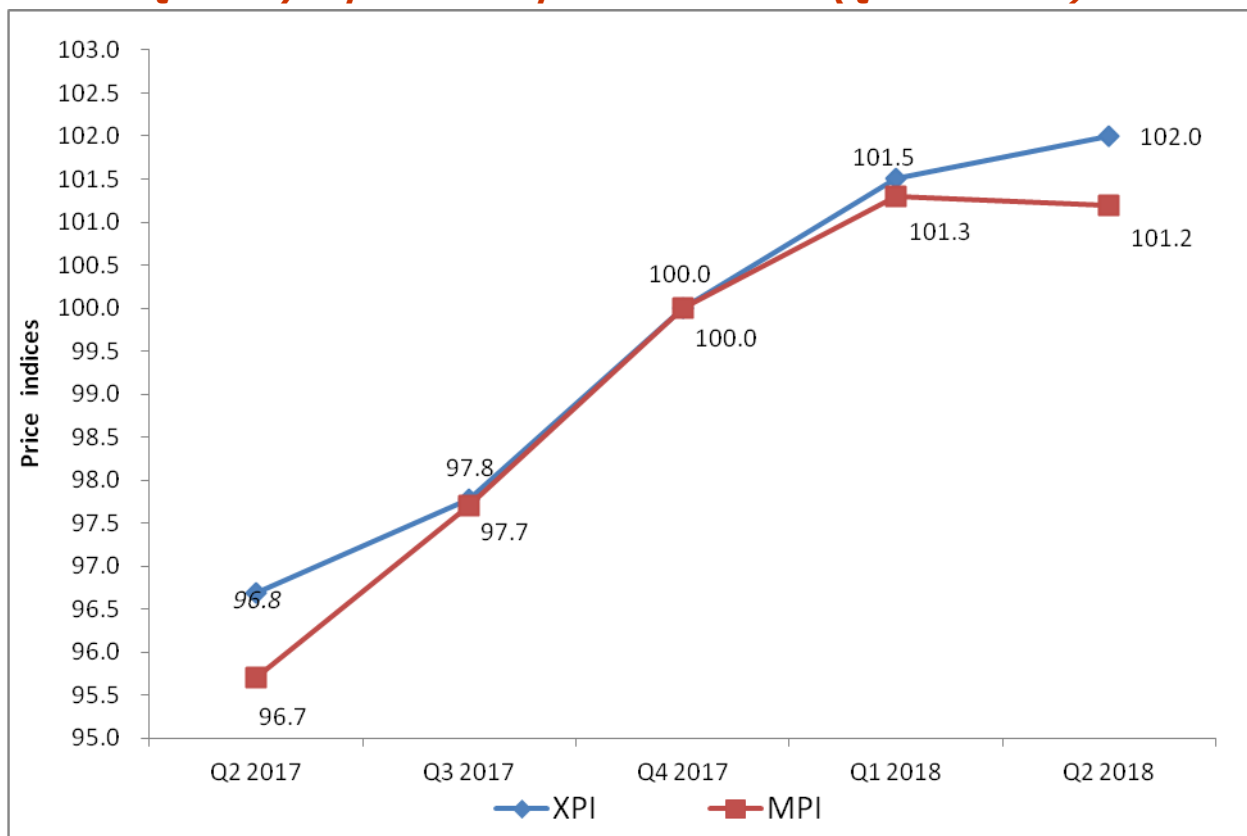
## Methodology

**Selection of items:** In the selection of items, a top - down procedure was applied in three steps. First the major 2 digit HS chapters contributing to the total value of imports in terms of the sum of values for the year 2014 to 2016 were selected for direct inclusion in the indices. 14 chapters (2 digit HS codes) were selected for imports and 12 chapters for exports out of 99 chapters representing 80 percent or more depending on the degree of concentration. Secondly, the process was repeated at 4 digit level of HS; 73 items were selected for imports and 19 items were selected for exports. Finally the procedure was repeated at 8 digit level of the HS by selecting 178 items for imports and 23 items for exports. The result of these procedures was the derivation of the structure and composition of the indices.

The XMPI has incorporated a number of methodological improvements including the use of geometric means for compiling elementary index aggregates, the use of an improved index compilation system, and improved procedures for collecting and processing prices. The Laspeyres index formula was used to compute higher level aggregates for the XMPI.

**Chart 1** depicts trend of XPI and MPI in the selected quarters.

**Chart 1: Quarterly Export and Import Price Indices (Q4 2017=100).**



Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

## Export Price Index

### Structure of the XPI

The XPI covers 12 chapters out of 99 chapters, namely; (i) Fish and crustacean, mollusk and other aquatic invertebrate, (ii) Edible vegetables and certain roots and tubers, (iii) Edible fruits and nuts, peel of citrus fruit or melons, (iv) Coffee, tea, mate and spices, (v) Oil seed, oleaginous fruits; miscellaneous grain, seed, fruit etc, (vi) Animal/veg fats & oil & their cleavage products; etc, (vii) Residues & waste from the food industry; prepared animal fodder, (viii) Tobacco and manufactured tobacco substitutes, (ix) cotton, (x) Wadding, felt & nonwoven; yarns; twine, cordage, etc, (xi) Glass and glassware and (xii) Natural/cultured pearls, precious stones and metals, coin, etc. The sampled twelve chapters constitute 80 percent of total value of exports, aggregated from 2014 to 2016.

### Quarterly Export Price Index

The overall export price index during the second quarter of 2018 increased by 0.5 percent to 102.0 compared to 101.5 recorded in the previous period. The rise was mainly explained by the increase in prices of coffee, tea, mate & spices, edible vegetables and certain roots and tubers (**Table1**).

**Table 1: Quarterly Export Price Indices by Chapter (Base period Q4 2017= 100)**

HS Code	Description	Weight	Q4 2017	Q1 2018	Q2 2018	% Change Previous Quarter
<b>Overall</b>		<b>100</b>	<b>100.0</b>	<b>101.5</b>	<b>102.0</b>	<b>0.5</b>
03	Fish & crustacean, mollusc & other aquatic invertebrate	6.2	100.0	102.5	101.9	-0.6
07	Edible vegetables and certain roots and tubers	11.4	100.0	100.3	102.2	1.9
08	Edible fruit and nuts; peel of citrus fruit or melons	17.4	100.0	104.7	105.7	0.9
09	Coffee, tea, mate and spices	4.3	100.0	96.8	98.6	1.8
12	Oil seed, oleagi fruits; miscell grain, seed, fruit etc	4.2	100.0	105.7	103.3	-2.3
15	Animal/veg fats & oil & their cleavage products; etc	7.4	100.0	100.7	101.7	1.0
23	Residues & waste from the food indust; prepr ani fodder	6.2	100.0	100.3	102.1	1.8
24	Tobacco and manufactured tobacco substitutes	5.9	100.0	103.5	101.5	-1.9
52	Cotton	1.0	100.0	100.3	100.9	0.6
56	Wadding, felt & nonwoven; yarns; twine, cordage, etc	4.9	100.0	102.8	103.4	0.6
70	Glass and glassware	2.2	100.0	100.0	101.1	1.1
71	Natural/cultured pearls, prec stones & metals, coin etc	28.9	100.0	100.5	101.9	1.4

*Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December*

### Sub indices by Chapter

In order to understand movements of export price indices, chapter by chapter analysis has been undertaken.

#### Chapter 03: Fish and crustacean, mollusk and other aquatic invertebrate

During the second quarter of 2018, the index for "Fish and crustacean, mollusk and other aquatic invertebrate" which account for 6.2 percent of the total weight decreased slightly by 0.6 percent to 101.9 from 102.5.

#### Chapter 07: Edible vegetables and certain roots and tubers

This chapter contributed 11.4 percent of the total weight of the exported commodities and the index for this chapter increased by 1.9 percent from 100.3 in the first quarter of 2018 to 102.2. This was mainly on account of the increase in prices of pigeon peas and green beans.

#### Chapter 08: Edible fruits and nuts, peel of citrus fruit or melons

The export price index for "Edible fruits and nuts", which accounts for 17.4 percent of the total weight, increased slightly by 0.9 percent to 105.7 from 104.7 recorded in the first quarter of 2018.

### **Chapter 09: Coffee, tea, mate and spices**

This chapter contributed 4.3 percent of the total weight of exported commodities. During the second quarter of 2018, "Coffee, tea, mate and spices" recorded XPI of 98.6, equivalent to 1.8 percent increase compared to 96.8 recorded in the first quarter. The positive performance was due to an increase in price of tea (Mombasa Auction).

### **Chapter 12: Oil seed, oleagi fruits; miscell grain, seed, fruit etc**

This chapter accounts for 4.2 percent of the total weight. During the second quarter of 2018, index for "Oil seed, oleagi fruits; miscell grain, seed, fruit etc" decreased by 2.3 percent to 103.3 from 105.7. The negative performance was a result of the fall in the price of sesame seeds.

### **Chapter 15: Animal/veg fats & oil & their cleavage products; etc**

The export price index for "Animal/veg fats & oil & their cleavage products; etc", which accounts for 7.9 percent of the total weight, increased by 1.0 percent to 101.7 in the second quarter of 2018 when compared to the previous quarter. The development was mainly attributed by the rise in the prices of crude sunflower oil.

### **Chapter 23: Residues & waste from the food indust; prepr ani fodder**

The export price index for "Residues & waste from the food indust; prepr ani fodder", which accounts for 6.2 percent of the total weight, increased by 1.8 percent to 102.1 in the second quarter of 2018 when compared to 100.3 of the previous period. The positive performance was a result of the increase in the price of cotton meal.

### **Chapter 24: Tobacco and manufactured tobacco substitutes**

This chapter accounts for 5.9 percent of the total weight. During the second quarter of 2018, index for "Tobacco and manufactured tobacco substitutes" decreased to 101.5 compared to 103.5 of the previous period.

### **Chapter 52: Cotton**

During the second quarter of 2018 the export price index for "Cotton", which accounts for 0.97 percent of the total weight, increased to 100.9 compared to 100.3 of the first quarter. The positive performance was attributed to low production in major growing countries following unfavorable weather conditions.

### **Chapter 56: Wadding, felt & nonwoven; yarns; twine, cordage, etc**

This chapter contributed 4.9 percent of the total weight of exported commodities. During the second quarter of 2018, "Wadding, felt & nonwoven; yarns; twine, cordage, etc" recorded XPI of 103.4, equivalent to 0.6 percent increase compared to 102.5 of the first quarter.

### **Chapter 70: Glass and glassware**

During the second quarter of 2018 the export price index for "Glass and glassware", which accounts for 2.2 percent of the total weight, increased by 1.1 percent to 101.1 compared to 100.0 of the first quarter. The development was attributed by the increase was the increase in the price of empty bottles.

### **Chapter 71: Natural/cultured pearls, precious stones and metals, coin etc**

The export price index for "Natural/cultured pearls, precious stones and metals, coin etc", which account for 28.9 percent of the total weight of exported commodities, increased by 1.4 percent to 101.9 from 100.5 recorded in the first quarter.

## **Import Price Index**

### **Structure of the MPI**

The MPI covers 14 chapters out of 99 chapters, namely; (i) Cereals, (ii) Animal fats and oil & their cleavage product, (iii) Mineral fuels, oils and product of their distillation, (iv) Pharmaceutical products, (v) Fertilizers, (vi) Miscellaneous chemical products, (vii) Plastics and articles thereof, (viii) Rubber and articles thereof, (ix) Iron and steel, (x) Articles of iron and steel, (xi) Nuclear reactors, boilers, machinery and machinery appliance, parts, (xii) Electrical machinery equipments parts thereof; sound recorder etc, (xiii) Vehicles other than railway/transport way rool-stock, parts and accessories and (xiv) Optical, photo, cine, meas, checking, precision, etc. The sampled twelve chapters constitute 80 percent of total value of imports aggregated from 2014 to 2016.

### **Quarterly Import Price Index**

The overall Import Price Index for the second quarter of 2018 slightly decreased by 0.05 percent to 101.2 compared to the 101.3 percent of the first quarter (**Table 2**).

**Table 2: Quarterly Import Price Indices by Chapter (Base period Q4 2013= 100)**

HS Code	Description	Weight	Q4 2017	Q1 2018	Q2 2018	% Change Previous Quarter
<b>Overall</b>		<b>100.0</b>	<b>100.0</b>	<b>101.3</b>	<b>101.2</b>	<b>-0.05</b>
10	Cereals	4.1	100.0	101.1	100.6	-0.5
15	Animal/veg fats & oil & their cleavage products; etc	4.2	100.0	98.2	97.9	-0.4
27	Mineral fuels, oils & product of their distillation; etc	21.7	100.0	109.7	117.4	7.0
30	Pharmaceutical products	5.2	100.0	100.7	101.1	0.4
31	Fertilisers	1.8	100.0	108.2	105.7	-2.3
38	Miscellaneous chemical products	2.0	100.0	100.3	100.3	0.0
39	Plastics and articles thereof	6.2	100.0	95.5	98.6	3.3
40	Rubber and articles thereof	2.8	100.0	100.3	89.4	-10.9
72	Iron and steel	5.3	100.0	101.2	102.1	0.9
73	Articles of iron and steel	4.0	100.0	100.4	101.3	0.9
84	Nuclear reactors, boilers, mchy & mech appliance; parts	15.2	100.0	101.0	102.0	1.0
85	Electrical mchy equip parts thereof; sound recorder etc	10.9	100.0	99.8	98.2	-1.7
87	Vehicles o/t railw/tranw rool-stock, pts & accessories	14.4	100.0	101.0	101.2	0.1
90	Optical, photo, cine, meas, checking, precision, etc	2.1	100.0	100.3	101.2	1.0

*Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December*

### Sub indices by Chapter

This section analyses movements of import price indices for each chapter.

#### Chapter 10: Cereals

This chapter attributes 4.1 percent of the total weight. During the second quarter of 2018, the import price index for "Cereals" decreased slightly by 0.5 percent to 100.6 from 101.1 recorded in the first quarter.

#### Chapter 15: Animal fats and oil and their cleavage product

This chapter contributes 4.2 percent of the total weight of the imported commodities and recorded MPI of 97.9 in the second quarter of 2018, representing a decrease of 0.4 percent from 98.2 of the first quarter of 2018.

#### Chapter 27: Mineral fuels, oils and product of their distillation

During the second quarter of 2018, import price index for "Mineral fuels, oils and product of their distillation" which contributes 21.7 percent to the total weight of the imported commodities increased by 7.0 percent to 117.4 from 109.7 of the first quarter. The increase was associated with the rise of prices petroleum products as a result of a tight supply following continued cut in production by OPEC member states and higher world oil demand.

### **Chapter 30: Pharmaceutical products**

The index for "Pharmaceutical products" which represent about 5.2 percent of the total weight increased marginally from 100.7 in the first quarter to 101.1 recorded in the second quarter of 2018.

### **Chapter 31: Fertilizers**

The index for "Fertilizers" which accounts for 1.8 percent of the total weight of the imported commodities decreased by 2.3 percent to 105.7 during the second quarter of 2018 compared to 108.2 recorded in the first quarter. The decrease was mainly attributed by a fall in the prices of Diammonium Phosphate (DAP) and urea in the world market.

### **Chapter 38: Miscellaneous chemical products**

The index for "Miscellaneous chemical products" which accounts for 2.0 percent of the total weight remained unchanged from 100.3 recorded in the first quarter of 2018.

### **Chapter 39: Plastics and articles thereof**

This chapter contributes 6.3 percent to the total weight of imported commodities. The index increased by 3.3 percent to 98.6 in the second quarter of 2018 from 95.5. The positive performance was a result of the increase in prices of plastic bags and empty plastic bottles.

### **Chapter 40: Rubber and articles thereof**

During the second quarter of 2018, the index for "Rubber and articles thereof" which contributes 2.9 percent to the total weight of imported commodities, decreased by 10.9 percent to 89.4 from 100.3 recorded in the first quarter. The performance was attributed by the decrease in the prices of brand new tyres for cars and trucks.

### **Chapter 72: Iron and steel**

In the second quarter of 2018, the index for "Iron and steel", which accounts for 5.3 percent of the total weight, increased slightly by 0.9 percent to 102.1 from 101.2 recorded in the first quarter.



### **Chapter 73: Articles of iron and steel**

This chapter contributes 4.0 percent of the total weight. During the second quarter of 2018, the index for "Articles of iron and steel" went up slightly by 0.9 percent to 101.3 when compared to 100.4 of the previous quarter.

### **Chapter 84: Nuclear reactors, boilers, machinery and mechanical appliance and parts**

The index for "Boilers, machinery and machinery appliance" which accounts for 15.3 percent of total weight of imported commodities increased by 1.0 percent to 102.0 in the second quarter of 2018. The positive performance was credited to the increase in prices of water pump, fan and condenser.

### **Chapter 85: Electrical machinery equipment and parts thereof**

The index for "Electrical machinery equipment and parts thereof" decreased by 1.7 percent to 99.2 in the second quarter of 2018 compared with 99.8 of the first quarter. The performance was credited to the decrease in prices of computer equipments (smart ups).

### **Chapter 87: Vehicles other than railway/transport ways road-stock**

The index for "Vehicles other than railway/transport ways road-stock" which accounts for 14.3 percent of total weight increased marginally by 0.1 percent to 101.2 in the second quarter of 2018 from 101.0 recorded in the first quarter.

### **Chapter 90: Optical, photo, cine, meas, checking, precision, etc**

This chapter accounts for 2.1 percent of the total weight. The index for "Optical, photo, cine, meas, checking, precision, etc" increased by 1.0 percent to 101.2 in the second quarter of 2018 compared with 100.3 of the first quarter. The development was attributed to the increase in prices of medical equipments and transmitter.

### **Terms of Trade**

The term of trade index is the ratio of export price index to import price index. During the second quarter of 2018, terms of trade index slightly improved making it favourable by displaying the increase of 0.6 points from the first quarter (**Table 3**).

**Table 3: Quarterly Terms of Trade (Base period Q4 2017 = 100)**

	Q4 2017	Q1 2018	Q2 2018
EXPI	100.0	101.5	102.0
MPI	100.0	101.3	101.2
TOT	100.0	100.2	100.8

**Note;**

Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

XPI = Export Price Index

MPI = Import Price Index

ToT = Terms of Trade

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