

METHODOLOGY OF TRADE INDICES

BASE YEAR 2017-2018



GOVERNMENT OF PAKISTAN

MINISTRY OF PLANNING, DEVELOPMENT & SPECIAL INITIATIVES

PAKISTAN BUREAU OF STATISTICS
External Trade Section - Karachi

MAY, 2022

FOREWORD

Pakistan Bureau of Statistics (PBS), is responsible to collect and compile the socio and economic statistics of the country which plays an important role in policy formulation and informed decision makings. PBS has made commendable efforts in improving and updating statistical methodology in general and trade statistics in particular. The Governing Council of Pakistan Bureau of Statistics in its 5th meeting in 2014 issued a policy directive to rebase the National Accounts after every ten years. As a result, National Accounts base year is changed from 2005-06 to 2015-16, the trade statistics also changed its base year from 1990-91 to 2017-18.

To rebase Trade Statistics from 1990-91 to 2017-18, a technical committee was constituted on 17-03-2020, to guide and review the progress of PBS. In this regard, two sessions of the Technical Committee were convened to advice and make recommendations. The recommendations of the technical committee were also endorsed by United Nations Statistics Division (UNSD). The Governing Council of Pakistan Bureau of Statistics approved the rebasing of trade statistics from 1990-91 to 2017-18 on 15th March, 2022.

The data collection strategies and computational methodologies of trade indices introduced under the new base will improve the quality of trade statistics and will enhance the scope and effectiveness of policies by providing efficient statistics collected in line with international best practices.

Efforts have been made to make this report comprehensive, informative and a useful document for researchers, planners, economists and other beneficiaries at large. Further questions, clarifications, comments, feedback and suggestions are welcomed.

I would like to congratulate the PBS Trade Statistics team which worked with full dedication for the successful completion of this report.

Islamabad, May, 2022

(Dr. Naeem uz Zafar)
Chief Statistician, PBS

TRADE STATISTICS TEAM INVOLVED IN REBASING OF TRADE INDICES (2017-18)

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COMPOSITION OF TECHNICAL COMMITTEE

1.	Secretary Planning/Chief Statistician, Pakistan Bureau of Statistics, Islamabad-	Chairman
2.	Additional Secretary, M/O Commerce, Islamabad	Member
3.	Chief Macro, Planning, Dev. and Special Initiatives Division, Islamabad	Member
4.	Member (NA/Trade), Pakistan Bureau of Statistics, Islamabad	Member
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9.	DG, Trade, M/O Commerce, Islamabad	Member
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11.	Director (DR&S), FBR, Islamabad	Member
12.	Mr. Azeem Shaukat, Sr. Manager, PRAL, Islamabad	Member
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16.	Representative of Federal Chamber of Commerce, Islamabad	Member
17.	Director (DP), PBS, Karachi	Member
18.	Director (Trade), PBS. Karachi	Member
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1. INTRODUCTION

Pakistan Bureau of Statistics (PBS) is the prime official agency of the country, responsible for collection, compilation and dissemination of reliable, efficient and timely statistics to the policy makers, planners and researchers. It publishes a variety of reports, based on primary and secondary data, especially on economic and social aspects of the country. After independence of Pakistan, Central Statistical Office (CSO) was setup by the Government of Pakistan in 1950 as an attached department of Economic Affairs Division. In 1972, Central Statistical Office (CSO) was upgraded to a full-fledged Statistics Division. The Division was re-organized in 1981 and its technical wing (the then CSO) was converted into Federal Bureau of Statistics (FBS) as one of its attached departments. As a step forward, Government of Pakistan has established Pakistan Bureau of Statistics, by merging Federal Bureau of Statistics, Population Census Organization, Agriculture Census Organization and the Technical Wing of Statistics Division through General Statistical (Reorganization) Act-2011. Presently it is an attached department of Ministry of Planning Development and Special Initiatives.

Since its inception, PBS has been giving utmost importance to Trade Statistics. Trade Statistics Section of PBS is responsible for compilation and dissemination of trade figures as well as computation of trade indices.

- 1- **Unit Value Index** measures the extent, to which changes in the values of export and import varies due to change in price/ unit value
- 2- **Quantum Index** measures the extent, to which changes in the values of export and import varies due to change in Quantity.
- 3- **Terms of trade:** It enables policy makers to assess the effect of change in prices of exports with those in imports of the commodities.

These indices provide a measure of the extent to which changes in the values of exports and imports occur due to changes in price/unit value levels and the extent to which value changes are accounted for by volume changes.

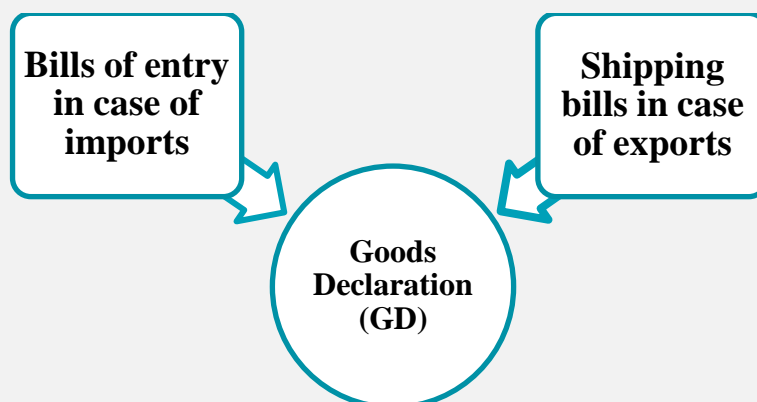
2. REBASING OF TRADE INDICES

2.1. History of trade indices

Indices of External Trade statistics of Pakistan are being compiled regularly since 1947. In the past, the trade indices series were computed with 1954-55, 1960-61, 1969-70, 1975-76, 1980-81 as base year. Presently trade indices are being computed with base year 1990-91. Now PBS has completed the process of rebasing of trade indices from 1990-91 to 2017-18. Details of previous base years are given below:

Description	Base Year						
	1954-55	1960-61	1969-70	1975-76	1980-81	1990-91	2017-18
Classification		SITC	SITC	SITC	SITC	SITC	HS
No. of Sections/ Groups		9	9	9	9	9	21
Total Items of Import			2514	1467	1003	3963	6107
Selected Items of Import		206	1563	1154	869	1124	3311
Total Items of Export			446	381	469	1400	3291
Selected Items of Export		38	402	358	453	632	1674

2.2 Data source



After the automation of trade data by the Federal Board of Revenue (FBR), Pakistan Revenue Automation (Pvt.) Limited (PRAL) has been providing trade data (Imports & Exports) in Excel format through E-mail to PBS every month.

2.3 Steps taken to rebase the trade statistics from 1990-91 to 2017-18

Keeping in view the importance of trade indices, PBS has taken the following steps to finalize the base year for Import/Export trade indices.

- Formulation of a Technical Committee to guide and review the methodology of rebasing of trade statistics from 1990-91 to 2017-18.
- Collaboration and consultation with several stakeholders such as; FBR and PRAL.
- Technical assistance from UNSD was sought to address the international standards in rebasing of trade statistics.

2.4. Technical Committee

For change of base of Trade Indices, a Technical Committee comprised of 19 members both from public and private sectors was constituted on February 19, 2020 and its first meeting was held on 17th March, 2020. The Committee proceeded according to the following TORs.

- a) To review the present methodology of computation of Trade Statistics and proposed methodology for base 2017-18.
- b) To examine critically the proposed export and import indices and the selected basket of goods.
- c) To examine the problems being faced in the computation of Trade Indices.
- d) To discuss and finalize the inclusion of EPZ transactions with rest of the world.

2.5. PBS and other stakeholders

In order to rebase trade indices PBS consulted and took other stakeholders on board.

- FBR appreciated the efforts made by PBS for change of base of trade indices and assured all possible cooperation relating to supply of trade data especially EPZ transactions with rest of the world.
- RAL agreed the provision of trade data inclusive of EPZ transactions with rest of the world.

2.6. Taking UNSD onboard

In pursuance of decision of first meeting of technical committee for change of base of trade indices held on 17.03.2020 and with the approval of the Secretary Planning & Special Initiatives/Chief Statistician PBS, United Nations Statistics Division (UNSD) was approached for provision of technical support for change of base of trade indices. UNSD agreed to provide technical assistance related to review of methodology for change of base of trade indices. For this purpose, PBS shared its **working paper for rebasing of trade indices** with UNSD. In view of current COVID pandemic, a virtual meeting using Microsoft Teams was held on **07.05.2020** between UNSD and PBS team to discuss the methodology in detail. On 20th May, 2020 UNSD, appreciated the efforts put forward by PBS. The UNSD also expressed their satisfaction regarding the procedure PBS is following for computing trade indices.

3. APPROVAL OF THE NEW BASE (2017-18)

The rebasing of Trade Indices from 1990-91 to 2017-18 approved by the Governing Council of PBS on the basis of recommendations of Technical Committee constituted for change of base of trade indices on 15th March, 2022.

4. SALIENT FEATURES OF THE NEW BASE (2017-18)

Following are the salient features of new base year 2017-18

1- In-line with UN recommendation for compilation of trade statistics

- The revised indices based on 2017-2018 base year are in accordance with UN recommended Harmonized Commodity Description and Coding Systems 2017.
- This revision enabled PBS to get indices of 21 HS sections consisting of several trade items defined by latest UN's Harmonized Commodity Description and Coding System (HS) while previously the grouping was done in 9 sections following the Pakistan Standard Trade Classification Rev. 3 (PSTC R3).

2- An extended basket of goods / commodities

- An extended basket of selected items comprising of 1,674 has been selected for construction of export indices and 3,311 items for import indices. Current count was 632 and 1,124 for export and import indices respectively.

3- Inclusion of EPZ data

Inclusion of EPZ data for compilation of trade statistics is a new addition. This will help to cover wider aspects of trade statistics.

5. BASE YEAR SELECTION AND REBASING PARAMETERS FOR COMPILATION OF TRADE INDICES

5.1. Selection of base year

World Custom Organization (WCO) has introduced Harmonized System (HS) of Classification Codes in 1988 which has undergone several changes; the recent changes were made in HS Codes Classification in 2017. Accordingly, Pakistan Custom has also revised its PCT code in July, 2017. The rebasing exercise also ensured that the 'baskets' of commodities and composition of imported items/commodities and exported items/commodities to be representative of the current trade patterns and in-line with the United Nations recommendations relating to trade statistics. The selection of 2017-2018 as new base year is helpful in presenting the current phenomenon by incorporating the recent modifications introduced in coding system of external trade data.

The work has been initiated on new base i.e. 2017-18, trade data and indices have been developed from the quarter of July-Sep 2018 to Jan-Mar-2020 (Seven Quarters).

5.2. Selection of items/commodities

During the rebasing exercise, the items/commodities included in the export and import indices baskets were reviewed and updated using the following criteria:

- Items with share equal to or greater than 0.01% of total imports/exports were selected.
- Items with share less than 0.01% of total value have been dropped.

- Items having monetary denomination only such as; gold, legal tender (securities, bank notes, currencies, coins in circulations) has been excluded.

5.3. Comparison of selected items

The following table compares the coverage of items in both bases i.e. old (1990-91) and new (2017-18).

SELECTION BY VALUES

TRADE TYPE	PERCENTAGE		DIFFERENCE
	2017-18	1990-91	
EXPORTS	99.5%	96.9%	2.6%
IMPORTS	99.4%	86.5%	12.9%

SELECTION BY ITEMS/HS CODES

TRADE TYPE	ITEMS/HS CODES		DIFFERENCE
	2017-18	1990-91	
EXPORTS	1674	632	1024
IMPORTS	3311	1124	2187

5.4. Commodity Classification

In pursuance of recommendations of UN Statistics Division, the Harmonized Commodity Description and Coding System (HS) for compilation of External Trade Statistics had been adopted in July 2002. Pakistan Bureau of Statistics (PBS), Federal Board of Revenue (FBR), Pakistan Customs, Ministry of Commerce and Trade Development Authority of Pakistan (TDAP) have prepared Alpha Register of more than 6000 HS codes at eight-digit level based on HS 2002. Currently the register is updated according to Harmonized Commodity Description and Coding System (HS) 2017 with 7356 HS codes at eight-digit level.

At present, the trade indices data is being prepared and published on commodity group level of 9 commodity groups defined by **Standard International Trade Classification (SITC-R3)**. By adopting 2017-18 as a base year the trade indices data will be in-line with HS coding scheme 2017 and will be issued according to HS coding system which consists of 21 sections. A detailed tabular representation of SITCR3 grouping and grouping based on HS Section is presented in (**Annexure I**).

5.5. Basket of goods / commodities and assigned weights

The trade indices for the base year 2017-18 covers 1674 Export and 3311 Import items, representing the current trade structure of Pakistan. The selection has been made under the criteria of having large transactional value (greater than 0.01% of total value).

- 1- For this purpose, each item within a particular HS section is assessed and share held by each item within section has been obtained.
- 2- As a second step items having share of less than 0.01% share in total value held at section level were ignored. A detailed tabular presentation of section wise basket of goods selected or ignored has been shown in **Annexure-II (A&B)**.
- 3- After the selection of basket of goods at each section below mentioned formula has been used to assign overall weights.
- 4- Summary details of current basket and proposed basket are given below: -

Base Year	External Trade	Actual Items	Selected Items	%age Selected	Actual Value (Billion Rs.)	Selected Value (Billion Rs.)	%age Selected
2017-18	Exports	3291	1674	51	2551.9	2538.7	99.5
	Imports	6107	3311	54	6693.7	6650.3	99.4
1990-91	Exports	1400	632	45	138.3	134.0	96.9
	Imports	3963	1124	28	171.1	148.1	86.5

The selected items are grouped into 21 sections. The weights of each HS group are given below:

S.No	ALL GROUPS	CH APTERS	Export	IMPORT
		01—99	100	100
1	Live Animals and Animals Products	1—5	3.29	0.42
2	Vegetable Products	6—14	14	5.48
3	Animal or Vegetable Fats, Oils and Waxes	15	0.18	3.75
4	Prepared Foodstuffs; Beverages, Spirits, Vinegar and Tobacco	16—24	5.65	0.93
5	Mineral Products	25—27	3.88	26.45
6	Products of Chemical or Allied Industries	28—38	1.73	10.91
7	Plastics and Articles thereof; Rubber and Articles thereof	39—40	1.31	5.22
8	Raw Hide and Skins, Leather, Fur skins and Articles thereof	41—43	4.36	0.16
9	Wood and Articles of Wood	44—46	0.17	0.36
10	Pulp of Wood or of other Fibrous Cellulosic Material	47—49	0.39	1.3
11	Textiles and Textile Articles	50—63	58.58	6.15
12	Footwear, Headgear, Umbrellas, Walking Sticks etc.	64—67	0.48	0.19
13	Articles of Stone, Plaster, Cement, Asbestos, Mica or similar Materials	68—70	0.19	0.79
14	Natural or Cultured Pearls, Precious or Semi Precious Stones, Metals	71	0.03	0.05
15	Base Metals and Articles or Base Metal	72—83	1.8	9.12
16	Machinery and Mechanical Appliances	84—85	0.73	19.29
17	Vehicles, Aircraft, Vessels and Associated Transport Equipment	86—89	0.17	6.99
18	Optical, Photographic, Cinematographer, Measuring, Checking, Precision Apparatus	90—92	1.66	1.52
19	Arms and Ammunition, Parts and Accessories thereof	93	0.02	0.01
20	Miscellaneous Manufactured Articles	94—96	1.4	0.92
21	Works of Arts, Collectors, Pieces, Antiques and Special Transactions NES	97—99	0	0

5.6. Coverage of export / import data

Trade data compiled by PBS includes all transactions carried through sea, air and land on government, semi-government and private accounts. Export statistics is a complete record of physical movement of merchandise out of Pakistan to foreign countries. Imports statistics represents the arrival of goods from foreign countries. However, following are excluded from export and import statistics:

- Defense stores
- Gold & Silver coin or bullion and currency notes
- Articles of Baggage and Personal effects of passengers
- Relief goods/goods of no commercial value
- Trade in transit through Pakistan

Currently PBS is compiling foreign trade statistics on the basis of primary data provided by FBR/PRAL excluding EPZ transactions with rest of the world. Later during the meeting held on 2-3 October, 2019 under the Chairmanship of Mr. Abdul Razak Dawood, Advisor to Prime Minister for Commerce, Textile, Industry & Production and Investment it was decided to include EPZ transactions with rest of the world in external trade statistics of Pakistan. Subsequently a meeting was held with representatives of PRAL in Karachi for provision of EPZ data. PRAL agreed to provide EPZ data for the compilation of trade indices on new base of 2017-18. Now, in this new base year EPZ transactions with rest of the world is a part of external trade statistics.

5.7. Trade Statistics Management Information System (TSMIS)

Currently, PBS is using COBOL based software for processing and compilation of external trade statistics. In order to upgrade/replace current processing system by using new technologies, it was decided to develop new software named **Trade Statistics Management Information System** (TSMIS). This software is currently in development phase.

TSMIS is based on following technologies:

- Microsoft Visual Studio 2019 (VB.Net)
- Microsoft SQL Server (2019)
- Crystal Reports

Software has following major modules:

- a) Data Loading and mapping with international /national standardization
- b) Data Editing/Consistency checking
- c) Reports

6. COMPILATION OF TRADE DATA

In order to maintain the quality of data the dataset is assessed and checked by using following criteria:

6.1. Treatment of raw data

1. **Missing quantities:**

If data has no quantity for items, we insert quantity of the items w.r.t to its standard unit value

2. **Adjustment of unit value:**

If data shows outliers and high variance in unit value of item, we adjust quantity to its standard unit value

3. **Change of HS code:**

If HS code of items does not match with its description, we change the HS code according to description.

4. **Change of units:**

If data has unstandardized units, we change units and adjust quantities according to standard units

5. **Homogeneity of units:**

If data shows more than one unit of an item, we make one homogenized standard unit of the item and adjust quantities according to it.

6. **Separation of samples and items that is uneconomical**

If data have samples and uneconomical values, we adjust them to specific HS codes (99090000 and 9910000)

7. COMPILATION METHODOLOGY FOR TRADE INDICES

7.1. Computational Steps taken for compilation of trade indices

Prior to computation of trade indices, the dataset goes through few stages in order to ensure efficiency and reliability of resulted index.

Step 1: Export and Import primary data is provided by FBR/PRAL on monthly basis.

Step 2: Primary data is checked thoroughly by the Export and import editing/coding teams in order to avoid any errors in listing and necessary amendments are made with the approval of senior officials.

Step 3: Exclusion of re-export and re-import from trade data.

Step 4: Addition of quantity of items whose quantity is not mentioned to get unit values.

Step 5: Exclusion of 34 value items of exports and 46 value items of imports.

Step 6: Items having %age share greater than 0.01% within group were selected.

Step 7: Selection of 1674 items out of 3291 items of export and 3311 items out of 6107 HS codes/ items of import.

Step 8: Correction of erroneous unit value of items. It involves editing and coding (treatment of raw data)

Step 9: Finalization of basket of goods of export and import for base year 2017-18.

Step 10: Master files of export and import are made for computation of External Trade Indices (ETI).

Step 11: ETI is calculated according to master files on quarterly basis from July-2018 onward.

7.2. Formulas used for computation

At present, PBS is computing the following indicators on quarterly basis;

1. Unit value index of exports
2. Unit value index of imports
3. Quantum index of exports
4. Quantum index of imports
5. Terms of trade

The Laspeyres formula, used for the computation of these indices is as under:

- 1- **Unit value Index:** Here total expenditures for all items at observation period using base year quantities are divided by the total expenditure for all items at the base period using base year quantities.

$$\text{Unit Value Index} = \frac{\sum(P_n Q_o)}{\sum(P_o Q_o)} \times 100$$

- 2- **Quantum Index:** for this purpose, the current quantum of export or import is multiplied by base year prices and divided by base year expenditure using base year price & Quantities. It depicts the variation in quantity of export or import in terms of quantity as compared to base year.

$$\text{Quantum Index} = \frac{\sum(P_o Q_n)}{\sum(P_o Q_o)} \times 100$$

Where

P_o stands for Unit Value of each item in the base year

P_n stands for Unit Value of each item in the current year

Q_o stands for Quantity of each item in the base year

Q_n stands for Quantity of each item in the current year

- 3- **Terms of trade:** The export and import unit value indices can be used to measure the Pakistan's terms of trade. The terms of trade index are calculated based on the ratio of unit value index of exports to the unit value index of imports. It represents the cost of a given volume of imports in terms of exports.

$$\text{Terms of trade} = \frac{\text{Unit Value Index of export}}{\text{Unit Value Index of import}} \times 100$$

8. COMPARISON OF INDICES (OLD BASE V/S NEW BASE)

8.1. Yearly comparison of indices

Year		Base year = 2017-18				Base year = 1990-91			
		Quantum Index	Change (%)	Unit Value Index	Change (%)	Quantum Index	Change (%)	Unit Value Index	Change (%)
Export	2017-18	100		100		220.55		735.5	
	2018-19	104.95	4.95	117.26	17.26	248.38	12.62	794.71	8.05
	2019-20	106.12	1.11	130.91	11.64	233.82	-5.86	841.44	5.88
	2020-21	111.7	5.26	170.8	30.47	247.77	5.97	903.14	7.33
Import	2017-18	100		100		415.76		1261.25	
	2017-19	105.57	2.57	115.05	15.05	381.96	-8.13	1342.3	6.43
	2019-20	105.42	-0.14	125.81	9.35	308.99	-19.10	1369.71	2.04
	2020-21	112.37	6.59	163.52	29.97	441.04	42.74	1450.51	5.90
Terms of trade	2017-18	100				57.67			
	2018-19	101.91				59.21			
	2019-20	104.05				61.43			
	2020-21	104.45				62.26			

The above table provides yearly comparison of Export and Import, Quantum and Unit Value Indices. For export indices based on new base year shows an increase of 4.95%, 1.11% and 5.26 % in quantum index as compared to an increase of 12.62%, -5.86% (decrease) and 5.97% in the base year (1990-91) for FY 2018-19, FY2019-20 and FY2021-22 respectively.

The unit value index of export shows an increase of 17.26%, 11.64% and 30.47% for the new base year (2017-18) and an increase of 8.05%, 5.88% and 7.33% for the Base year (1990-91) for FY2018-19, FY2019-20 and FY2020-21 respectively. As far as comparison of Quantum and Unit value indices for Import is concerned; Import Quantum index shows an increase of 2.57%, -0.14%(decrease) and 6.59% for the base year 2017-18 for FY2018-19, FY2019-20 and FY2020-21 respectively while a decline of 8.13%, -19.10% and increase of 42.74 % can be seen for the base year 1990-91 during the FY2018-19, FY2019-20 and FY2020-21. The unit value index shows an increase of 15.05%, 9.35% and 29.97% for the new base year (2017-18) and an increase of 6.43%, 2.04% and 5.90% for the previous Base year (1990-91) during FY 2018-19, 2019-20 and 2020-21. Terms of trade for year 2018-19, 2019-20 and 2020-21 on the basis of 2017-18 base period stood at 101.91, 104.05 and 104.45 respectively, whereas term of trade for the same periods on the basis of 1990-91 base period were 59.21, 61.43 and 62.26 respectively.

8.2. Quarterly Comparison of Indices

Quarterly Export Indices								
Year/Quarter	Base year 2017-18				Base year 1990-91			
	Quantum Index	% Change with Previous Quarter	Unit Value Index		Quantum Index	% Change with Previous Quarter	Unit Value Index	% Change with Previous Quarter
2017-18	100		100		220.55		735.5	
Jul-Sep 2018	94.53	-5.47	108.77	8.77	219.21	-0.61	755.16	2.67
Oct-Dec 2018	105.92	12.05	115.51	6.20	247.15	12.75	795.77	5.38
Jan-Mar 2019	109.54	3.42	119.63	3.57	260.91	5.57	807.94	1.53
Apr-Jun 2019	109.82	0.26	125.11	4.58	266.25	2.05	820.19	1.52
Jul-Sep 2019	110.40	0.53	127.75	2.11	264.47	-0.67	830.09	1.21
Oct-Dec 2019	112.44	1.85	134.15	5.01	261.60	-1.09	855.28	3.03
Jan-Mar 2020	118.59	5.47	133.35	-0.60	246.46	-5.79	849.77	-0.64
Apr-Jun 2020	83.06	-29.96	128.38	-3.73	162.73	-33.97	830.61	-2.25
July-Sep 2020	101.76	22.51	154.2	20.11	213.51	31.21	886.91	6.78
Oct-Dec 2020	118.29	16.24	180.79	17.24	253.5	18.73	914.85	3.15
Jan-Mar 2021	115.94	-1.99	175.69	-2.82	271.76	7.20	908.87	-0.65
Apr-Jun 2021	110.82	-4.42	172.51	-1.81	252.29	-7.16	901.92	-0.76
July-Sep 2021	109.71	-1.00	192.11	11.36	256.05	1.49	967.48	7.27
Oct-Dec 2021	121.34	10.60	215.12	11.98	279.57	9.19	1181.9	22.16

Quarterly Import Indices								
Year/Quarter	Base year 2017-18				Base year 1990-91			
	Quantum Index	% Change with Previous Quarter	Unit Value Index		Quantum Index	% Change with Previous Quarter	Unit Value Index	% Change with Previous Quarter
2017-18	100		100		415.76		1261.25	
Jul-Sep 2018	96.23	-3.77	110.74	10.74	369.94	-11.02	1309.39	3.82
Oct-Dec 2018	110.87	15.21	115.69	4.47	400.29	8.20	1334.50	1.92
Jan-Mar 2019	98.07	-11.55	113.39	-1.99	373.20	-6.77	1328.50	-0.45
Apr-Jun 2019	105.09	7.16	120.39	6.17	384.39	3.00	1396.81	5.14
Jul-Sep 2019	104.87	-0.21	122.53	1.78	298.28	-22.40	1370.92	-1.85
Oct-Dec 2019	100.46	-4.21	128.52	4.89	332.85	11.59	1387.10	1.18
Jan-Mar 2020	99.15	-1.30	127.36	-0.90	313.75	-5.74	1368.44	-1.35
Apr-Jun 2020	117.18	18.18	124.84	-1.98	291.06	-7.23	1352.37	-1.17
July-Sep 2020	104.09	-11.17	137.58	10.21	359.81	23.62	1378.39	1.92
Oct-Dec 2020	112.29	7.88	155.36	12.92	382.84	6.40	1406.44	2.03
Jan-Mar 2021	110.84	-1.29	172.76	11.20	482.54	26.04	1471.46	4.62
Apr-Jun 2021	122.25	10.29	188.36	9.03	538.96	11.69	1545.75	5.05
July-Sep 2021	125.91	2.99	218.28	15.88	565.05	4.84	1678.3	8.58
Oct-Dec 2021	125.91	0.00	231.42	6.02	489.31	-13.40	1917.48	14.25



The above drawn figures are based on the quarterly computed indices (See Annexure-III)

8.3. Comparison of trade indices (SITC v/s. Hs coding scheme)

As discussed earlier the compilation of indices based on 2017-18 base year will be calculated and presented according to HS -21 sections. Previously indices were calculated according to SITC grouping scheme, based on 9 groups. A detailed comparison of data presentation with previous and new presentation is shown in (Annexure IV& V).

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ANNEXURE- I: SITC AND HS CODING SYSTEM

SITC R3 Grouping	HS Coding System Section	Chapter
(Section 0) Food & Live Animals	1. Live animals; animal products	01-05
	2. Vegetable products	06-14
(Section 1) Beverages & Tobacco	3. Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	15
	4. Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes	16-24
(Section 2) Crude Material Inedible except Fuel	5. Salt; sulphur; earths and stone; plastering materials, lime and cement	25-27
	6. Products of the chemical or allied industries	28-38
(Section 3) Mineral Fuels, Lubricants and Related Materials	7. Plastics and articles thereof; rubber and articles thereof	39-40
	8. Raw hides and skins (other than fur skins) and leather	41-43
	9. Wood and articles of wood; wood charcoal	44-46
(Section 4) Animal and Vegetable Oil, fats and waxes	10. Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	47-49
	11. Textiles and textile articles	50-63
(Section 5) Chemicals	12. Footwear, gaiters and the like; parts of such articles	64-67
	13. Articles of stone, plaster, cement, asbestos, mica or similar materials	68-70
(Section 6) Manufactured Goods classified chiefly by materials	14. Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	71
	15. Base metals and articles of base metal	72-83
(Section 7) Machinery & Transport Equipment	16. Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	84-85
	17. Vehicles, aircraft, vessels and associated transport equipment	86-89
(Section 8) Miscellaneous Manufactured Articles	18. Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	90-92
	19. Arms and ammunition; parts and accessories thereof	93
	20. Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plates and the like; prefabricated buildings	94-96
	21. Works of art, collectors' pieces and antiques	97-99

ANNEXURE- II-A SECTION WISE BASKET OF EXPORT ITEMS

HS SECTION	DESCRIPTION	GROUPS	GROUPS WEIGHT	VALUE (IN BILLION RUPEES)			SHARE PERCENTAGE SELECTED	
				TOTAL	SELECTED	IGNORED	%ITEMS	%VALUE
ALL		01--99	100	2551.9	2538.7	13.19	50.9	99.5
1	Live Animals and Animals Products	1--5	3.29	83.87	83.8	0.08	71.3	99.9
2	Vegetable Products	6--14	14	357.37	356.5	0.88	39.5	99.8
3	Animal or Vegetable Fats, Oils and Waxes	15	0.18	4.53	4.5	0	59.3	99.3
4	Prepared Foodstuffs; Beverages, Spirits, Vinegar and Tobacco	16--24	5.65	144.12	144	0.14	62.6	99.9
5	Mineral Products	25--27	3.88	98.89	98.8	0.11	50	99.9
6	Products of Chemical or Allied Industries	28--38	1.73	44.22	44.1	0.13	53	99.7
7	Plastics and Articles thereof; Rubber and Articles thereof	39--40	1.31	33.34	33.3	0.06	54.1	99.9
8	Raw Hide and Skins, Leather, Fur skins and Articles thereof	41--43	4.36	111.32	111.2	0.07	66.7	99.9
9	Wood and Articles of Wood	44--46	0.17	4.35	4.3	0	84.9	98.9
10	Pulp of Wood or of other Fibrous Cellulosic Material	47--49	0.39	9.85	9.8	0.01	64.9	99.5
11	Textiles and Textile Articles	50--63	58.58	1494.8	1483.6	11.26	41.5	99.3
12	Footwear, Headgear, Umbrellas, Walking Sticks etc.	64--67	0.48	12.25	12.2	0	70.5	99.6
13	Articles of Stone, Plaster, Cement, Asbestos, Mica or similar Materials	68--70	0.19	4.9	4.9	0.01	64.8	100
14	Natural or Cultured Pearls, Precious or Semi-Precious Stones, Metals	71	0.03	0.79	0.8	0	94.1	100
15	Base Metals and Articles or Base Metal	72--83	1.8	45.84	45.6	0.2	40.3	99.5
16	Machinery and Mechanical Appliances	84--85	0.73	18.58	18.5	0.13	49.5	99.6
17	Vehicles, Aircraft, Vessels and Associated Transport Equipment	86--89	0.17	4.24	4.2	0	79.2	99.1
18	Optical, Photographic, Cinematographer, Measuring, Checking, Precision Apparatus	90--92	1.66	42.41	42.4	0.05	28.9	100
19	Arms and Ammunition, Parts and Accessories thereof	93	0.02	0.47	0.47	0	100	100
20	Miscellaneous Manufactured Articles	94--96	1.4	35.74	35.7	0.06	49.3	99.9
21	Works of Arts, Collectors, Pieces, Antiques and Special Transactions NES	97--99	0	0.02	0	0	100	100

ANNEXURE- II-B: SECTION WISE BASKET OF IMPORT ITEMS

HS SECTION	DESCRIPTION	GROUPS	GROUPS WEIGHT	VALUE (IN BILLION RUPEES)			SHARE PERCENTAGE SELECTED	
				TOTAL	SELECTED	IGNORED	%ITEMS	%VALUE
ALL		01--99	100	6693.73	6650.27	43.46	54.2	99.4
1	Live Animals and Animals Products	1--5	0.42	27.79	27.75	0.04	51.7	99.9
2	Vegetable Products	6--14	5.48	366.66	365.73	0.93	45.1	99.7
3	Animal or Vegetable Fats, Oils and Waxes	15	3.75	251.09	251.02	0.07	63.4	100
4	Prepared Foodstuffs; Beverages, Spirits, Vinegar and Tobacco	16--24	0.93	62.33	62.23	0.11	60.6	99.8
5	Mineral Products	25--27	26.45	1770.32	1767.7	2.62	28.7	99.9
6	Products of Chemical or Allied Industries	28--38	10.91	730.21	721.37	8.84	50	98.8
7	Plastics and Articles thereof; Rubber and Articles thereof	39--40	5.22	349.5	348.66	0.84	71.3	99.8
8	Raw Hide and Skins, Leather, Fur skins and Articles thereof	41--43	0.16	10.55	10.55	0	78.4	100
9	Wood and Articles of Wood	44--46	0.36	24.13	24.11	0.01	77.7	99.9
10	Pulp of Wood or of other Fibrous Cellulosic Material	47--49	1.3	86.86	86.79	0.07	76.6	99.9
11	Textiles and Textile Articles	50--63	6.15	411.64	407.63	4.01	34.5	99
12	Footwear, Headgear, Umbrellas, Walking Sticks etc.	64--67	0.19	12.63	12.63	0	82	100
13	Articles of Stone, Plaster, Cement, Asbestos, Mica or similar Materials	68--70	0.79	52.59	52.53	0.06	77.8	99.9
14	Natural or Cultured Pearls, Precious or Semi-Precious Stones, Metals	71	0.05	3.51	3.51	0	59.3	100
15	Base Metals and Articles or Base Metal	72--83	9.12	610.76	605.66	5.11	53.2	99.2
16	Machinery and Mechanical Appliances	84--85	19.29	1291.24	1271.63	19.61	53.1	98.5
17	Vehicles, Aircraft, Vessels and Associated Transport Equipment	86--89	6.99	467.89	467.03	0.86	59.4	99.8
18	Optical, Photographic, Cinematographer, Measuring, Checking, Precision Apparatus	90--92	1.52	101.8	101.58	0.21	64.4	99.8
19	Arms and Ammunition, Parts and Accessories thereof	93	0.01	0.45	0.45	0	96.4	100
20	Miscellaneous Manufactured Articles	94--96	0.92	61.69	61.62	0.06	75	99.9
21	Works of Arts, Collectors, Pieces, Antiques and Special Transactions NES	97--99	0	0.09	0.09	0	85.7	100

ANNEXURE-III: Quarterly Comparison of Export / Import Indices

Quarterly Export Indices				
Year/Quarter	Base year 2017-18		Base year 1990-91	
	Quantum Index	Unit Value Index	Quantum Index	Unit Value Index
2017-18	100	100	220.55	735.5
Jul-Sep 2018	94.53	108.77	219.21	755.16
Oct-Dec 2018	105.92	115.51	247.15	795.77
Jan-Mar 2019	109.54	119.63	260.91	807.94
Apr-Jun 2019	109.82	125.11	266.25	820.19
2018-19	104.95	117.26	248.38	794.77
Jul-Sep 2019	110.4	127.75	264.47	830.09
Oct-Dec 2019	112.44	134.15	261.6	855.28
Jan-Mar 2020	118.59	133.35	246.46	849.77
Apr-Jun 2020	83.06	128.38	162.73	830.61
2019-20	106.12	130.91	233.82	841.44
Jul-Sep 2020	101.76	154.2	213.51	886.91
Oct-Dec 2020	118.29	180.79	253.5	914.85
Jan-Mar 2021	115.94	175.69	271.76	908.87
Apr-Jun 2021	110.82	172.51	252.29	901.92
2020-21	111.70	170.80	247.77	903.14
Jul-Sep 2021	109.71	192.11	256.05	967.48
Oct-Dec 2021	121.34	215.12	279.57	1181.90
Quarterly Import Indices				
2017-18	100	100	415.76	1261.25
Jul-Sep 2018	96.23	110.74	369.94	1309.39
Oct-Dec 2018	110.87	115.69	400.29	1334.5
Jan-Mar 2019	98.07	113.39	373.2	1328.5
Apr-Jun 2019	105.09	120.39	384.39	1396.81
2018-19	102.57	115.05	381.96	1342.30
Jul-Sep 2019	104.87	122.53	298.28	1370.92
Oct-Dec 2019	100.46	128.52	332.85	1387.1
Jan-Mar 2020	99.15	127.36	313.75	1368.44
Apr-Jun 2020	117.18	124.84	291.06	1352.37
2019-20	105.42	125.81	308.99	1369.71
Jul-Sep 2020	104.09	137.58	359.81	1378.39
Oct-Dec 2020	112.29	155.36	382.84	1406.44
Jan-Mar 2021	110.84	172.76	482.54	1471.46
Apr-Jun 2021	122.25	188.36	538.96	1545.75
2020-21	112.37	163.52	441.04	1450.51
Jul-Sep 2021	125.91	218.28	565.05	1678.3
Oct-Dec 2021	125.91	231.42	489.31	1917.48

Quarterly Terms of Trade		
Year/Quarter	Base year 2017-18	Base year 1990-91
2017-18	100	58.31
Jul-Sep2018	98.22	57.67
Oct-Dec 2018	99.84	59.63
Jan-Mar 2019	105.5	60.82
Apr-Jun 2019	103.92	58.74
2018-19	101.87	59.22
Jul-Sep2019	104.26	60.55
Oct-Dec 2019	104.38	61.66
Jan-Mar 2020	104.70	62.10
Apr-Jun 2020	102.84	61.42
2019-20	104.05	61.43
Jul-Sep 2020	112.08	64.34
Oct-Dec 2020	116.37	65.05
Jan-Mar 2021	101.7	61.77
Apr-Jun 202	91.59	58.35
2020-21	104.45	62.26
Jul-Sep 2021	88.01	57.65
Oct-Dec 2021	92.96	61.64

ANNEXURE IV: COMPARISON OF QUANTUM INDICES BASED ON SITC-R3 VS. HS CODING SYSTEM SECTION

SITC R3 Grouping (1990-91=100)				HS Coding System Sections (2017-18=100)			
SL NO.	GROUPS	2018-19		SL NO.	GROUPS	2018-19	
		QUANTUM INDEX				QUANTUM INDEX	
		EXPORT	IMPORT			EXPORT	IMPORT
	ALL GROUPS	248.38	381.96		ALL GROUPS	104.95	102.57
1	(Section 0)			1	LIVE ANIMALS, ANIMAL PRODUCTS	97.15	73.85
	Food & Live Animals	265.65	260.63	2	VEGETABLE PRODUCTS	94.08	105.77
2	(Section 1)			3	ANIMAL/VEG. FATS,OIL & WAXES ETC.	123.08	109.59
	Beverages & Tobacco	439.61	513.65	4	PREP.OF FOOD STUFF,BEV.TOBACO ETC	84.19	104.08
3	(Section 2)			5	MINERAL PRODUCTS	106.92	106.27
	Crude Material Inedible except Fuel	239.38	796.42	6	PRODUCT OF CHEM.&ALIED INDUSTRIES	123.17	115.38
4	(Section 3)			7	PLASTIC AND ARTICLES THEREOF ETC.	141.61	96.53
	Mineral Fuels, Lubricants and Related Materials	100.9	173.12	8	RAW HIDES & SKINS,LEATHER,FUR & ART	91.82	108.97
5	(Section 4)			9	WOOD & ART OF WOOD,CHARCOAL,CORK	98.45	106.46
	Animal and Vegetable Oil, fats and waxes	0.00	236.21	10	PULP OF WOOD OF FIBR CELLULOSIC MATERIAL	84.43	102.57
6	(Section 5)			11	TEXTILE AND TEXTILE ARTICLES	109.94	102.50
	Chemicals	586.22	358.27	12	FOOTWARE,WALKING STICK & UMBR.	122.41	102.24
7	(Section 6)			13	ARTIC. OF STONE,GLASS, CEMENT,CERA	132.06	83.69
	Manufactured Goods classified chiefly by materials	205.6	319.7	14	PEARLS PRE/SEMI PRECIOUS STONES	83.16	60.62
8	(Section 7)			15	BASE METAL& ARTICLE OF BASE METAL	119.80	96.25
	Machinery & Transport Equipment	2636.51	708.22	16	MACH. & MECH./ELECT.APPL. EQUIP.	116.72	101.75
9	(Section 8)			17	VEHICLE,AIRCRAFT,VESSEL OF TPT.EQU	122.68	78.88
	Miscellaneous Manufactured Articles	349.13	447.43	18	OPT. PHOTOGRAPHIC MED.SURG. INSTRUMENTS	79.20	136.60
				19	ARMS & AMMUNITION & PARTS	92.51	61.06
				20	MISC. MANUFACTURED ARTICLE	110.67	83.48
				21	ART WORK,COLLECTOR PRICES & ANTIQUES	117.55	53.42

ANNEXURE V: COMPARISON OF UNIT VALUE INDICES BASED ON SITC-R3 VS. HS CODING SYSTEM SECTION

SITC R3 Grouping (1990-91=100)				HS Coding System Sections (2017-18=100)			
SL NO.	GROUPS	2018-19		SL NO.	GROUPS	2018-19	
		UNIT VALUE INDEX				UNIT VALUE INDEX	
		EXPORT	IMPORT			EXPORT	IMPORT
	ALL GROUPS	794.77	1342.30		ALL GROUPS	117.30	115.05
1	(Section 0)			1	LIVE ANIMALS, ANIMAL PRODUCTS	118.42	103.46
	Food & Live Animals	1229.51	908.93	2	VEGETABLE PRODUCTS	122.76	108.35
2	(Section 1)			3	ANIMAL/VEG. FATS,OIL & WAXES ETC.	104.80	101.59
	Beverages & Tobacco	860.48	1325.61	4	PREP.OF FOOD STUFF,BEV.TOBACO ETC	114.94	115.46
3	(Section 2)			5	MINERAL PRODUCTS	123.49	122.02
	Crude Material Inedible except Fuel	1119.52	1102.13	6	PRODUCT OF CHEM.&ALIED INDUSTRIES	105.81	110.75
4	(Section 3)			7	PLASTIC AND ARTICLES THEREOF ETC.	123.31	115.76
	Mineral Fuels, Lubricants and Related Materials	2016.59	1564.46	8	RAW HIDES & SKINS,LEATHER,FUR & ART	118.94	118.32
5	(Section 4)			9	WOOD & ART OF WOOD,CHARCOAL,CORK	124.01	111.17
	Animal and Vegetable Oil, fats and waxes	0	995.35	10	PULP OF WOOD OF FIBR CELLULOSIC MATERIAL	122.23	120.32
6	(Section 5)			11	TEXTILE AND TEXTILE ARTICLES	113.08	115.96
	Chemicals	1129.18	1335.1	12	FOOTWARE,WALKING STICK & UMBR.	118.93	112.69
7	(Section 6)			13	ARTIC. OF STONE,GLASS, CEMENT,CERA	113.60	119.50
	Manufactured Goods classified chiefly by materials	616.9	1110.15	14	PEARLS PRE/SEMI PRECIOUS STONES	160.13	110.28
8	(Section 7)			15	BASE METAL& ARTICLE OF BASE METAL	129.78	115.67
	Machinery & Transport Equipment	1466.32	1458.64	16	MACH. & MECH./ELECT.APPL. EQUIP.	141.96	112.78
9	(Section 8)			17	VEHICLE,AIRCRAFT,VESSEL OF TPT.EQU	128.28	108.97
	Miscellaneous Manufactured Articles	887.27	2186.14	18	OPT. PHOTOGRAPHIC MED.SURG. INSTRUMENTS	168.85	121.91
				19	ARMS & AMMUNITION & PARTS	122.03	100.57
				20	MISC. MANUFACTURED ARTICLE	125.61	127.96
				21	ART WORK,COLLECTOR PRICES & ANTIQUES	80.58	108.02