

INDIA'S TRADE RELATIONS WITH AFGHANISTAN

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ABSTRACT

International trade is a way to improve the bilateral relationship between two countries. This study has attempted to estimate India's bilateral trade relations with Afghanistan. This study is based on secondary data for the period 1996-97 to 2019-20. The objectives of the paper to study India's trade relations with Afghanistan in terms of trends and structure during the pre and post SAFTA period and to identify the further scopes of India's trade with Afghanistan. In the study trend analysis has been used to determine the direction and projection of the trend for India's trade with Afghanistan by fitting the trend method. Trade potential formula applied to predict or evaluate the relative trade performance of India and Afghanistan in a particular commodity as evidenced by trade flow. The study has been found that at present, India's trade with Afghanistan is US\$ 2 billion which is 0.19% of India's world trade. It has been also found that India has huge trade potential with Afghanistan. The study predicts India's exports, imports and trade for the period 2020-21 to 2020-28. It shows the increasing trend of India's trade with Afghanistan during the study period.

KEYWORDS

SAFTA, Trade, International Trade, Trend, Commodity.

INTRODUCTION

India and Afghanistan have a highly intensive relationship based on historical and cultural links. The relationship is not up to govt., it has its foundation in the historical contacts and exchange between the people. In the recent past, Indo-Afghan relations have been further strengthened by the Strategic Partnership Agreement, which was signed between the countries in Oct. 2011. The Strategic Partnership Agreement between India and Afghanistan provides for assistance to rebuild Afghanistan's infrastructure. It will increase investment in Afghanistan's natural resource, providing duty-free access to the Indian market for Afghanistan's exports support for an Afghan-led, Afghan-owner, broad-based inclusive process of peace and reconciliation and advocating the need for a sustained and long commitment to Afghanistan by the international community (Foreign Relations/ Afghanistan, 2021). On 25th Dec. 2016, Prime Minister along with a high-level delegation paid a visit to Afghanistan. During his visit he inaugurated the newly build Afghan Parliament, he announced 500 scholarship for the children of the martyrs of Afghan Security Forces in school and college both in Afghanistan and India and Prime Minister gifted four Mi25 attack helicopter to Afghan Air Forces. During their visit, it is decided to conduct the

first Strategic Partnership Council meeting headed by the foreign minister of both countries in the first quarter of 2016 along with four joint working group meeting (Chauhan, 2018). At present, India's trade with Afghanistan is US\$ 2 billion which is 0.19% of India's world trade. The main commodities traded in India with Afghanistan are Edible Fruit and Nuts, Peel of Citrus Fruit; Lac, Gums, Resine and other Vegetable Saps and Extracts, Cereals; Mineral fuels, mineral oils and products of their distillation; bituminous substances; Mineral waxes; Pharmaceutical product; Rubber and articles thereof; Article of apparel and clothing accessories, not knitted or crocheted, Other made up textile articles; sets; worn clothing and worn textile articles; rags; Footwear, gaiters and the like; parts of such articles.; Iron and steel; Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof; Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts; Vehicles other than railway or tramway rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical; Aircraft, spacecraft etc.

REVIEW OF LITERATURE

Literature review provides information on the work done in the related area and theoretical framework on which the proposed solution of the problem can be based. The review of the various studies regarding India-Afghanistan trade relations has been presented as under:

Amin R., Dwived S. & Shrama P.K (2015): In the study India and Afghanistan An overview of their economic relations have highlights some important aspects of international relation between India and Afghanistan such as economic and development relations. **Wani & Haq N. UI (2018):** In their research Paper Trade compatibility between Afghanistan and India an empirical evaluation has examined the trade compatibility between Afghanistan and India by using Revealed comparative advantage (RCA) and trade intensity index (TII). It has been found that India has more RCA and trade positional with Afghanistan. **Akhter N. & Malik A. H (2016):** In their paper, India's involvement in Afghanistan an analytic perspective of current interest and future prospects have attempted to explore the concerns and interest that motivate India's recent efforts to step up its engagement in Afghanistan and the future prospects of India's Afghanistan involvement. **Burhani G. M. & Wani N. UI Haq (2019):** examined Afghanistan -India trade linkage collaboration and future prospects and objectives of the study are to examine the trends and patterns of growth of India's trade with Afghanistan economy and to know trade intensity and RCA between India's and Afghanistan. It has been suggested to policy implication for both countries have rejuvenated the sectors where they are enjoying the trade advantage to get the competitive edge. **Price G. (2013):** has study India's policy towards Afghanistan and complements a forthcoming report examine its broader

foreign policy and also map out how India engages with Afghanistan economically, politically and socially. **Mustafa G., Asif M. and Arslan M. (2018):** In their research paper “Indo- Afghanistan relations: challenges for Pakistan” have discussed various political, economical and strategically issues of Indo-Afghan business relations. It has been found that the increased influence of India over Afghanistan increases the difficulty for bilateral trade relations between Afghanistan and Pakistan.

RESEARCH METHODOLOGY

Research methodology refers to the process of conducting the research which includes various methods and techniques. It is not only describing the steps involved in conducting the research but also justifies the choice of various methods.

STATEMENT OF THE PROBLEM

The above-mentioned review of literature covers the significant areas of India’s trade relations with Afghanistan but there remain some unexplored area which needs to be examined with further study. In this research, the investigation has been made to study the trade pattern and potentials between India and Afghanistan. Therefore, the present study is conducted on “India’s Trade Relations with Afghanistan” which is undertaken to fill the research gap.

OBJECTIVES OF THE STUDY

Objective spell out the basic philosophy of the whole study and in the present study following objectives have been undertaken:

- To study India’s trade relations with Afghanistan in terms of trends and structure during the pre and post SAFTA period.
- To identify the further scopes of India’s trade with Afghanistan.

HYPOTHESIS OF THE STUDY

Following objective of the study the following hypotheses have been formulated:

$H_0(1)$ = There is no significant difference in India’s exports to Afghanistan in the pre and post SAFTA period.

$H_0(2)$ = There is no significant difference in India’s imports to Afghanistan in the pre and post SAFTA period.

$H_0(3)$ = There is no significant difference in India’s total trade with Afghanistan in the pre and post SAFTA period.

$H_0(4)$ = There is no significant difference in India’s balance of trade with Afghanistan in the pre and post SAFTA period.

$H_0(5)$ = There is no significant difference in India’s terms of trade with Afghanistan in pre and post SAFTA period.

SOURCE OF DATA

This study is based on a secondary source of information. The data is collected from various sources such as the handbook of statistics of the Indian economy of the Reserve Bank of India, Government of India, Ministry of Commerce & Industry, Department of Commerce, UN Comtrade Database, and Trade Map Database, World Factbook. Various journals and many other authentic online sources were also used.

SCOPE OF THE STUDY

The present study focused on India's trade relations with Afghanistan. It is further divided into Pre-SAFTA i.e. 1996-97 to 2005-06 and Post-SAFTA period i.e. 2006-07 to 2019-20.

TREND ANALYSIS

Trend analysis is the practice of collecting historical data from multiple periods and plotting this data on a horizontal line to determine the direction of the trend. It is based on the idea that what has happened in the past and gives an idea of what will happen in the future. In this study, trend analysis has been used to determine the direction and projection of the trend for India's trade with Afghanistan by fitting the trend method. The fitting trend method is a least square method in which a trend line is fitted to the time series data. In the study linear fitting trend has been employed which fits the following straight-line trend equation:

$$Y = a + bx$$

Where,

Y: Trade; x: time (in years); a is constants; b gives the measure of annual increase or decrease in trade.

The trend analysis has been used to determine the direction and projection of the data on India's trade, exports and imports, and terms of trade with Afghanistan.

TRADE POTENTIAL

Free trade between two countries or regions would provide maximum mutual gains from trade for participating countries if these countries exhibit significant trade potential with each other. So, it is necessary to examine whether there is considerable trade potential among India and Afghanistan in a particular commodity. The potential of a given commodity can therefore be calculated using the following formula (Kumar, 2015):

$$\text{Trade Potential of a Product} = [\{ \text{Minimum } X_i \text{ or } M \text{ Afghanistan} \} - E X_i \& \text{ Afghanistan}]$$

Here,

X_i = India's total world exports of a given product

$M_{Afghanistan}$ = Afghanistan's world imports of a given product

EX_i & Afghanistan = existing bilateral exports of a given product from India to Afghanistan.

ANALYSIS AND INTERPRETATIONS

In this section, data has been analyzed and interpreted with help of the Percentage, Ratio, Trade potential formula, and trend analysis with the help of the least square method. The analysis has been presented under:

ANALYSIS OF INDIA'S TRADE RELATION WITH AFGHANISTAN

The analysis of India's trade with Afghanistan has been presented from two perspectives– India's trade relation with Afghanistan during pre-SAFTA and post-SAFTA period. The detailed analysis is as under-

INDIA'S TRADE WITH AFGHANISTAN IN PRE-SAFTA PERIOD

The analysis of India's trade with Afghanistan during pre-SAFTA period includes analysis of imports, exports, the balance of trade, import-export ratio and total trade. The detailed analysis has been done with the help of the table.

Table-1: India's Trade with Afghanistan in Pre-SAFTA Period

(Values in US\$ Millions)

Years	Exports to world	Imports from world	Total trade with the world (2+3)	Exports to Afghan.	Imports from Afghan.	Total Trade with Afghan. (5+6)	BOT (5-6)	TOT (6/5)
1	2	3	4	5	6	7	8	9
1996-97	33469.70	39132.40	72602.10	22.80	3.10	25.90	19.70	0.14:1
1997-98	35006.40	41484.50	76490.90	21.20	10.70	31.90	10.50	0.50:1
1998-99	33218.70	42388.70	75607.40	12.80	28.10	40.90	-15.30	2.20:1
1999-00	36822.40	49670.70	86493.10	33.20	21.10	54.30	12.10	0.64:1
2000-01	44560.30	50536.50	95096.80	25.90	26.60	52.50	-0.70	1.03:1
2001-02	43826.70	51413.30	95240.00	24.40	17.60	42.00	6.80	0.72:1
2002-03	52719.40	61412.10	114131.50	60.80	18.50	79.30	42.30	0.30:1
2003-04	63842.60	78149.10	141991.70	145.50	40.50	186.00	105.00	0.28:1
2004-05	83535.90	111517.40	195053.30	164.40	47.00	211.40	117.40	0.29:1
Average	37460.91	45313.68	82774.59	56.78	23.69	80.47	33.09	0.42:1

BOT: Balance of Trade, TT: Term of Trade.

Source: Government of India, Ministry of Commerce and Industry Department, Data retrieved on June 15, 2017, www.commerce.nic.in

Table-1, explains India's exports to the world, imports from the world, total trade with the world and various dimensions of India's trade relation with Afghanistan viz. India's exports to Afghanistan, imports from Afghanistan, total trade with Afghanistan, the balance of trade with Afghanistan, the import-export ratio with Afghanistan and percentage of India's exports and imports with Afghanistan in pre-SAFTA period that is with effect from 1996-97 to 2004-05. Exports to Afghanistan was US \$22.80 million in 1996-97 which increased to the US

\$164.40 million in 2004- 05, this shows the increase in exports except for the years 1997-98, 1998-99, 2000-01 and 2001-02 during which exports declined to the US \$21.20 million, US \$12.80 million, US \$25.90 million and US \$24.40 million as compared to the respective previous year. The average exports during pre-SAFTA period were US \$56.78 million. India's imports from Afghanistan were US \$3.10 million in 1996-97 which increased to US \$47.00 million in 2004-05. Imports from Afghanistan reflects the increasing position except for the years 1999-00 and 2001-02 during which imports were US \$21.10 million and US \$17.60 million respectively. The average imports during pre-SAFTA period were US \$23.69 million.

India's total trade with Afghanistan was US \$25.90 million in 1996-97 which reached US \$211.40 million in 2004-05. Trade shows a continuous increase during pre-SAFTA period except for the years 2000-01 and 2001-02 during which trade declined to US \$52.50 million and US \$42.00 million as compared to the respective previous year. The average trade during pre-SAFTA period was US \$80.47 million. India's balance of trade position was favourable with Afghanistan during the pre-SAFTA period except for the years 1998-99 and 2000-01. The balance of trade was US \$19.70 million in 1996-97 and increased to US \$117.40 million in 2004-05, this shows the increasing trend, whereas the balance of trade declined to US \$10.50 million, US \$ -15.30 million and US \$ -0.70 million during 1997-98, 1998-99 and 2000-01 respectively.

The table also shows the percentage share of Afghanistan's exports and imports in India's total exports and imports. Afghanistan's share in India's exports was 0.07 percent in 1996-97 which increased to 0.23 percent in 2003-04 and further declined to 0.20 percent in 2004-05. The average share of Afghanistan's exports in India's total exports was 0.15 percent. Afghanistan's share in India's total imports was 0.01 percent in 1996-97 which increased to 0.05 percent in 2003-04 and reduced to 0.04 percent in 2004-05. The average share of Afghanistan's imports in India's total imports was 0.05 percent. Further, the analysis of import-export ratio reveals that India's exports to Afghanistan were more than its imports except for the years 1998-99 and 2000-01. The import-export ratio was 0.14:1 in 1990-91 which increased to 0.29:1 in 2004-05. This ratio was minimum in 1998-99, which was 2.20:1.

Afghanistan's share in India's total global trade was 0.04 percent in 1990-91 which reached 0.11 percent in 2004-05. The average of Afghanistan's share in India's total global trade was 0.10 percent during pre SAFTA period, which is very insignificant.

INDIA'S TRADE WITH AFGHANISTAN IN POST-SAFTA PERIOD

The analysis of India's trade with Afghanistan during post SAFTA period also includes analysis of imports, exports, the balance of trade, import-export ratio

and total trade. The detailed analysis has been done with the help of the following table.

Table-2: India's Trade with Afghanistan in Post-SAFTA Period

(Values in US\$ Millions)

Years	Exports to world	Imports from world	Total trade with the world (2+3)	Exports to Afghanistan	Imports from Afghanistan	Total Trade with Afghanistan (5+6)	BOT (5-6)	TOT (6/5)
1	2	3	4	5	6	7	8	9
2005-06	103090.50	149165.70	252256.20	142.70	58.40	201.10	84.30	0.41:1
2006-07	126414.10	185735.20	312149.30	181.70	34.50	216.20	147.20	0.19:1
2007-08	162904.20	251439.20	414343.40	248.90	109.20	358.10	139.70	0.44:1
2008-09	182799.50	298833.90	481633.40	396.50	128.80	525.30	267.70	0.32:1
2009-10	178751.40	288372.90	467124.30	464.50	124.40	588.90	340.10	0.27:1
2010-11	254402.10	352575.00	606977.10	411.70	122.40	534.10	289.30	0.30:1
2011-12	305963.90	489319.50	795283.40	506.90	129.70	636.60	377.20	0.26:1
2012-13	300400.70	490736.70	791137.40	472.20	158.20	630.40	314.00	0.34:1
2013-14	314415.70	450213.70	764629.40	475.80	212.80	688.60	263.00	0.45:1
2014-15	310352.00	448033.40	758385.40	422.20	263.80	686.00	158.40	0.62:1
2015-16	262003.70	380356.30	642360.00	524.80	310.00	834.80	214.80	0.59:1
2016-17	275852.43	384357.03	660,209.46	506.30	292.90	799.20	213.40	0.58:1
2017-18	303526.16	465580.99	769,107.15	709.70	433.80	1143.50	275.90	0.61:1
2018-19	330078.09	514078.42	844156.51	715.44	435.44	1150.89	280.00	0.60:1
2019-20	313217.25	473988.29	787205.55	997.58	529.84	1527.42	467.74	0.53:1
Average	248278.10	374852.40	623130.50	478.46	222.94	701.40	255.51	0.59:1

BOT: Balance of Trade, TT: Term of Trade.

Source: Hand Book of Statistics of Indian Economy, RBI, 2015-16, Data retrieved on June 30, 2017.

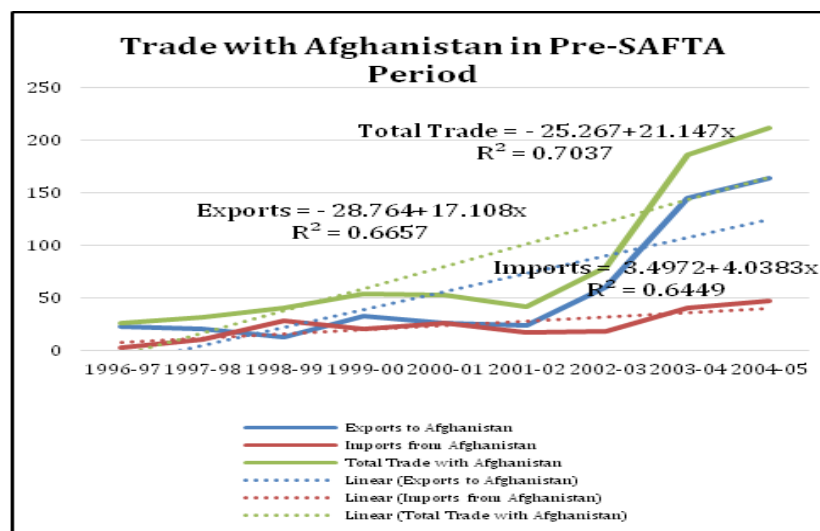
Table -2, explains India's exports to world, imports from world, total trade with world and state of affairs of India's trade with Afghanistan viz. India's exports to Afghanistan, imports from Afghanistan, total trade with Afghanistan, the balance of trade with Afghanistan, the import-export ratio with Afghanistan and percentage of India's exports and imports with Afghanistan in post-SAFTA period that is with effect from 2005-06 to 2019-20. Exports to Afghanistan was US \$142.70 million in 2005-06 which increased to US \$997.58 million in 2019-20, this shows that there is a continuous rise in exports except for the years 2010-11, 2012-13, 2014-15 and 2016-17 during which the exports declined to US \$411.70 million, US \$472.20 million, US \$422.20 million and US \$506.30 million regarding respective previous year. The average exports during post-SAFTA period were US \$478.46 million. India's imports from Afghanistan were US \$58.40 million in 2005-06 which increased to US \$529.84 million in 2019-20. Imports from Afghanistan reflect the increasing trend except for the years 2006-07, 2009-10, 2010-11 and 2016-17. The average imports during post-SAFTA period were US \$222.94 million.

India's total trade with Afghanistan was US \$201.10 million in 2005-06 which reached to US \$1527.42 million in 2019-20. Trade shows the continuous increase

during post SAFTA period except for the years 2010-11, 2012-13, 2014-15 and 2016-17 during which trade declined to US \$534.10 million, US \$630.40 million, US \$686.00 million and US \$603.29 million as compared to the respective previous year. The average trade during post-SAFTA period was US \$701.40 million. India's balance of trade position was favourable with Afghanistan during the post-SAFTA period. The balance of trade was US \$84.30 million in 2005-06 and increased to US \$ 467.74million in 2019-20, which shows the increasing trend, whereas the balance of trade has declined during 2007-08, 2010-11, 2012-13, 2013-14, 2014-15 and 2016-17 as compared to the respective previous year. The average balance of trade during the post-SAFTA period was US \$255.51 million.

The table also shows the terms of trade were 0.41:1 in 2005-06 which increased to 0.53:1 in 2019-20, which indicates that increasing trend, whereas the terms of trade have declined during 2006-07,2007-08, 2009-10,2011-12 and 2019-20 as compared to the respective previous year. The average terms of trade during the post-SAFTA period were 0.59:1.

4.2 Trend Analysis of Indo- Afghanistan Trade: Figure-1, shows trends and lines of best fit of India's trade with Afghanistan. India's trends of exports and trade showed a steep rise after 2001 whereas import registered a humble increase during pre SAFTA period. In the post SAFTA period exports, imports and trade are showing an increasing trend. The R^2 values in respect to export, import and trade are 0.6057, 0.6449 and 0.7037 respectively which demonstrates that 61 percent, 65 percent and 70 percent variation in India's export, import and trade with Afghanistan can be explained by independent variable during pre SAFTA period and regarding the post SAFTA period the value of R^2 regarding export, import and trade are 0.7725, 0. 8736 and 0.8893 respectively which demonstrates that 77 percent, 87 percent and 89 percent variation in India's export, import and trade with Sri-Lanka can be explained by the independent variable.



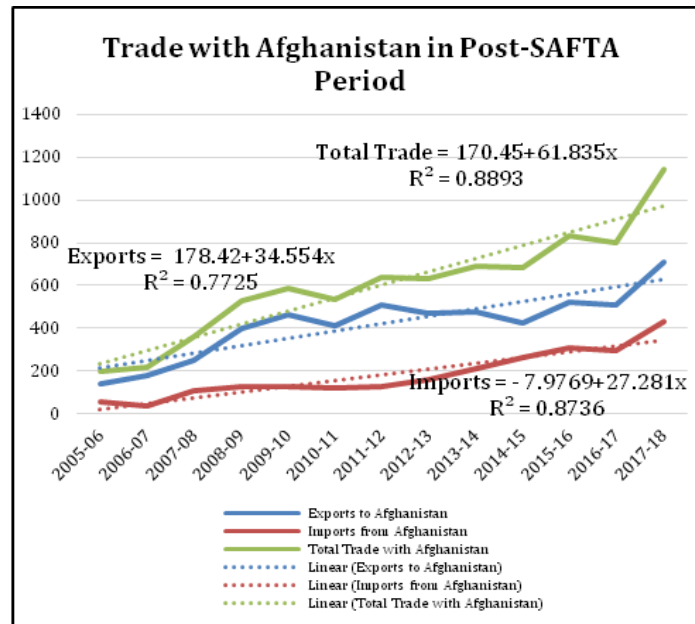


Figure 1: India’s Trade with Afghanistan in Pre and Post SAFTA Period

Source: Author’s Calculations, computed from the data extracted from UN COMTRADE statistics and International trade centre (ITC).

INDIA’S PROJECTED TRADE WITH AFGHANISTAN

Table-3, describes India’s projected imports, exports and trade with Afghanistan from 2021 to 2028. India’s imports, exports, and total trade, from US\$ 428.519 million, US\$ 731.284million and US\$ 1159.810 million respectively in 2021 to US\$ 619.486 million, US\$ 973.162million and US\$ 1192.655 million respectively in 2028.

Table -3: India’s Projected Trade with Afghanistan

Years	Imports	Exports	Total Trade
2021	428.519	731.284	1159.810
2022	455.800	765.838	1221.645
2023	483.081	800.392	1283.480
2024	510.362	834.946	1345.315
2025	537.643	869.500	1407.150
2026	564.924	904.054	1468.985
2027	592.205	938.608	1530.820
2028	619.486	973.162	1592.655

Source: Author’s Calculations, computed from the data extracted from UN COMTRADE statistics and International trade centre (ITC)

Descriptive Analysis of India’s Trade with Afghanistan during Pre and Post SAFTA Period: presents the descriptive analysis of India’s trade relation with Afghanistan during the pre and post SAFTA period. The information provided in the table has been used to prove the given null hypotheses.

Table-4: Descriptive Analysis of India's Trade with Afghanistan during Pre and Post SAFTA Period

Variable	Pre-SAFTA period					Post-SAFTA period					t-value	p-value
	Mean	Standard deviation	Sk.	C.V (%)	CGR (%)	Mean	Standard deviation	Skewness	C.V (%)	CGR (%)		
Exports	56.78	57.43	1.44	101.14	31.60	420.30	153.11	-0.36	36.43	10.50	-8.00	0.00
Imports	23.69	13.77	0.38	58.13	26.00	182.99	113.67	0.90	62.12	18.20	-7.19	0.00
Trade	80.47	69.04	1.46	85.80	27.90	603.29	255.37	0.24	42.33	12.60	-8.40	0.00
BOT	33.09	47.00	1.21	142.42		237.31	86.68	-0.19	36.53		-6.69	0.00
TOT	2.68	2.08	1.47	78.02	-8.85	2.77	1.09	0.94	39.73	-3.26	-1.29	0.221

Source: Author's calculation, SPSS output.

Table-4 presents the analysis of India's trade with Afghanistan in the pre and post- SAFTA period. The mean value of India's exports to Afghanistan during pre-SAFTA period was US\$ 56.78 million with a standard deviation of US\$ 57.43 million and positive skewness 1.44 explains that the variation in exports is on the lower side of the mean whereas, during the post-SAFTA period, the mean value was US\$ 420.30 million with standard deviation US\$ 153.11 million and the negative value of skewness – 0.36 shows that the variation was on the higher side of the mean. Coefficients of variation for pre and post-SAFTA period were 101.14 percent and 36.43 percent respectively, which shows that the variation in exports was higher in the pre-SAFTA period. The compounded growth rate shows that the growth rate was also higher in the pre-SAFTA period as compared to post-SAFTA period. The analysis of t-value and p-value shows that the null hypothesis H₀ (1) is rejected at a 1 percent level of significance. Hence, there is a significant difference in India's exports to Afghanistan in the pre and post-SAFTA period. The higher mean value of exports during the post-SAFTA period indicates that the position was better during the post-SAFTA period.

The average value of India's imports from Afghanistan in pre-SAFTA period was US\$ 23.69 million with a standard deviation of US\$ 13.77 million and the positive value of skewness 0.38, explains that the variation in imports was on the lower side of the mean whereas in the post-SAFTA period, the mean has increased to US\$ 182.99 million with standard deviation US\$ 113.67 million and the positive skewness show that the variation in imports was on the lower side of the mean. The coefficients of variation were 58.13 percent in the pre-SAFTA period and 62.12 percent in the post-SAFTA period, which reveals that the variation in imports was more in the post-SAFTA period. Further, the compounded growth rates are 26 percent and 18.20 percent in the pre and post-SAFTA period respectively, which indicates higher growth in the pre-SAFTA period. The analysis of t-value and p-value shows that the null hypothesis H₀ (2) is rejected at a 1 percent level of significance. Hence, it can be concluded that there is a significant difference in India's imports from Afghanistan in the pre and post-

SAFTA period. The higher mean value of imports during the post-SAFTA period indicates that the position was better during the post-SAFTA period.

The mean value of India's total trade in pre-SAFTA period was US\$ 80.47 million with a standard deviation of US\$ 69.04 million and skewness 1.46 show that the variation was on the lower side of the mean whereas in the post-SAFTA period, the average value has increased to US\$ 603.29 million with a standard deviation of US\$ 255.37 million and skewness 0.24 shows that the variation was towards the lower side of the mean. The analysis further reveals that the coefficients of variation are 85.80 percent and 42.33 percent in the pre and post-SAFTA period respectively, which show that the variation was higher in the pre-SAFTA period as compared to the post-SAFTA period. The compounded growth rates are 27.90 percent and 12.60 percent in the pre and post-SAFTA period respectively. On applying the t-test, the calculated value is -8.40 which is significant at a 1 percent level of significance. Hence, the null hypothesis H₀ (3) is rejected and so there is a significant difference in the total trade during the pre and post-SAFTA period. The higher mean value of trade during the post-SAFTA period indicates that the position was better during the post-SAFTA period.

The average value of India's balance of trade in pre-SAFTA period was US\$ 33.09 million with a standard deviation of US\$ 47.00 million and skewness 1.21 which shows that the variation was on the lower side of the mean whereas, in the post-SAFTA period, the average value has increased to US\$ 237.31 million with a standard deviation of US\$ million 86.68 and negative skewness - 0.19, show that the variation was on the higher side of the mean. The analysis further reveals that the coefficients of variation were 142.42 percent and 36.53 percent in the pre and post-SAFTA period respectively, which show that the variation was higher in the pre-SAFTA period as compared to the post-SAFTA period. On applying the t-test, the calculated value is -6.69 which is significant at 1percent level of significance. Hence, the null hypothesis H₀ (4) is rejected and there is a significant difference in the balance of trade during the pre and post-SAFTA period. The higher mean value of the balance of trade during the post-SAFTA period indicates that the position was better during the post-SAFTA period.

The mean value of India's terms of trade in pre-SAFTA period was 2.68 with a standard deviation of 2.08 and skewness 1.47, which shows that the variation was on the lower side of the mean whereas, in the post-SAFTA period, the mean value declined to 2.77 with standard deviation 1.09 and skewness 0.94 shows that variation was on the lower side of the mean. The coefficients of variation were 78.02 percent and 39.73 percent in the pre and post-SAFTA period respectively, which shows that the variation was higher in the pre-SAFTA period as compared to the post-SAFTA period. The compounded growth rates were - 8.85 percent and -3.26 percent in the pre and post-SAFTA period respectively, which reveals that position was comparatively better during the post-SAFTA

period. Further, the p-value 0.000 shows that the null hypothesis H₀ (5) is accepted at a 1 percent level of significance. The higher mean value of terms of trade during the post-SAFTA period indicates that the position was better during the post-SAFTA period.

COMMODITY STRUCTURE OF INDIA'S TRADE WITH AFGHANISTAN

In this section discussed India's top twenty commodities exports and imports with Afghanistan during the study period in five-year intervals. The detailed analysis is as under-

Table-5: Commodity Structure of India's Exports with Afghanistan

(Values in US\$ Millions)

Sr. No.	HS Code	Commodity	1996-97	2001-02	2006-07	2011-12	2016-17	2017-18
01	04	Dairy Products	NA	0.07	2.70	6.43	7.34	14.58
02	09	Tea, Mate and Spices Coffee	0.92	0.62	2.01	3.03	3.13	4.06
03	17	Sugars and Sugar Confectionery	0.00	1.97	1.52	5.46	5.22	0.45
04	24	Tobacco and Manufactured Tobacco Substitutes	0.47	2.16	9.72	55.09	37.95	56.56
05	29	Organic Chemical	0.10	0.29	0.71	1.00	2.55	7.45
06	30	Pharmaceutical Products	2.26	1.12	42.87	48.76	65.68	84.84
07	31	Fertilizers	NA	NA	NA	NA	6.29	NA
08	38	Miscellaneous Chemical Products	NA	0.02	0.08	0.26	0.83	1.16
09	40	Rubber and Articles Thereof	10.09	5.54	2.75	10.73	5.65	6.31
10	52	Cotton	1.22	2.99	4.03	1.68	0.94	2.20
11	54	Man-Made Filaments	0.47	0.99	22.71	120.35	34.79	47.11
12	55	Man-Made Staple Fibers	0.19	0.55	6.30	12.58	43.07	46.09
13	58	Special Woven Fabrics	0.06	NA	0.23	2.40	6.98	1.88
14	61	Articles of Apparel and Clothing Accessories, Knitted or Crocheted	0.18	0.01	0.88	28.22	77.98	56.19
15	62	Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted	0.19	1.29	19.62	44.82	101.00	109.10
16	72	Iron and Steel	0.11	0.53	6.82	0.54	0.11	0.46
17	73	Articles of Iron or Steel	0.14	0.75	10.97	4.83	1.00	60.72
18	76	Aluminium and Articles Thereof	0.00	0.02	9.43	2.63	9.40	40.56
19	85	Electrical Machinery and Equipment	0.15	0.07	6.67	20.65	10.14	18.45
20	98	Project Goods	NA	NA	0.08	0.00	11.38	0.01
		Total (Including Others)	22.74	24.37	182.11	510.90	507.68	709.75

Source: Government of India, Ministry of Commerce & Industry, Department of Commerce, Data Retrieved on 10 August 2017(www.commerce.nic.in)

Table – 5, shows the composition of India's exports to Afghanistan from the period 1996-97 to 2016-2017 at the interval of every five years. The main items of exports to Afghanistan include: Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted; Articles of Apparel and Clothing Accessories, Knitted or Crocheted; Pharmaceutical Products; Man-Made Staple Fibers; Tobacco and

Manufactured Tobacco Substitutes; Man-Made Filaments; Project Goods; Electrical Machinery and Equipment; Aluminium and Articles Thereof; Dairy Products; Special Woven Fabrics; Fertilizers; Rubber and Articles Thereof; Sugars and Sugar Confectionery etc. The analysis shows that the exports of these items are increasing over the years and it is expected that the export of these items and that of many other items will increase in the future as India being the dominant economy of the region will play a significant part in the development of Afghanistan. Though at present Afghanistan is affected by terrorist activities yet as peace and democracy will be restored there the role of responsible democracy like India will be very prominent in the socio-politico-economic development of Afghanistan. The significant feature of the study of the composition of exports is that the exports of Man-Made Filaments were US \$ 0.47 million in 1996-97 which increased to US \$120.35 million in 2011-12 and declined to US \$ 34.79 million 2016-17; Similarly, the exports of Electrical Machinery and Equipment were US \$0.15 million in 1996-97 which increased to US \$20.65 million in 2011-12 and declined to US \$10.14 million 2016-17.

**Table-6: Commodity Structure of India's Imports with Afghanistan
(Values in US\$ Millions)**

Sr. No.	HS Code	Commodity	1996-97	2001-02	2006-07	2011-12	2016-17	2017-18
01	07	Edible Vegetables and Certain Roots and Tubers	NA	0.01	0.07	0.25	12.32	10.74
02	08	Edible Fruit and Nuts, Peel or Citrus Fruit	0.72	13.75	15.31	84.55	167.24	274.79
03	09	Tea, Mate and Spices Coffee	0.64	0.04	3.26	2.28	26.06	33.66
04	12	Oil Seeds and Olea Fruits	0.20	0.14	0.12	0.50	6.69	8.90
05	13	Lac, Gums, Resine and other Vegetable Saps and Extracts	1.42	0.15	15.04	41.68	80.05	103.33
06	51	Wool, Fine	0.04	NA	0.00	0.05	0.25	0.09
07	52	Cotton	NA	3.27	0.03	NA	NA	NA
08	85	Electrical Machinery	0.00	0.03	0.07	0.17	0.02	0.01
		Total (Including Others)	3.05	17.52	34.37	132.50	292.90	433.78

Source: Government of India, Ministry of Commerce & Industry, Department of Commerce, Data Retrieved on 09 August 2017 (www.commerce.nic.in)

Table -6, shows the composition of India's imports from Afghanistan from the period 1996-97 to 2016-2017 at the interval of every five years. The main items of imports include: Edible Fruit and Nuts, Peel of Citrus Fruit – the imports of these items were US \$0.72 million in 1996-97 and increased to US \$167.24 million in 2016-17; Lac, Gums, Resine and other Vegetable Saps and Extracts -- the imports of these items were US \$1.42 million in 1996-97 and increased to US \$80.05 million in 2016-17; Tea, Mate and Spices Coffee -- the imports of these items were US \$0.64 million in 1996-97 and increased to US \$26.06 million in 2016-17; Edible Vegetables and Certain Roots and Tubers-- the imports of these items were US \$ 0.01 million in 2001-02 and increased to US \$12.32 million in 2016-17 etc. The analysis shows that India's composition of imports from

Afghanistan is not impressive. Further, the study of the composition of imports and exports reveals that there are certain items like Cotton and Tea, Mate and Spices Coffee and Electrical Machinery which constitute both items of import and exports.

Trade Potential between India and Afghanistan by commodity classification: with the help of applying a trade potential formula to calculate commodities wise trade potential for India's trade with Afghanistan in 2018. The detailed analysis is presented as under-

**Table-7: Trade Potential between India and Afghanistan
By commodity classification 2018**

(Values in US\$ Millions)

SN	HS Code	Commodities	India's World Exports	Afghan's world Imports	India's Exports to Afgh.	Trade Potential
1	02	Meat and edible meat offal	3726.99	52.36	0.29	52.07
2	03	Fish and crustaceans, mollusks and other aquatic invertebrates'	6349.82	1.88	0.01	1.87
3	09	Coffee, tea, mate and spices	3130.71	41.21	13.32	27.89
4	10	Cereals	7773.86	218.98	10.27	208.71
5	27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; Mineral waxes.	48293.17	348.60	0.50	348.10
6	29	Organic chemicals	17742.51	16.77	11.33	5.43
7	30	Pharmaceutical product	14277.18	218.38	83.42	134.96
8	32	Tanning or dyeing extracts; tannins and their deri dyes, pigments and other colouring matter; paints and ver; Putty and other mastics; Inks	3230.67	24.19	0.10	24.10
9	38	Miscellaneous chemical products	4412.74	13.99	1.43	12.56
10	39	Plastic and articles thereof	7844.03	64.34	2.35	61.99
11	40	Rubber and articles thereof	3159.77	118.97	8.81	110.17
12	42	Article of leather, saddler and harness; travel goods, handbags and similar conter. articles of animal gut (other than silk-warm) gut	2487.75	9.71	0.23	9.49
13	52	Cotton	8130.13	8.37	2.30	6.08
14	55	Man-made staple fibers	1911.87	53.37	39.83	13.54
15	61	Articles of apparel and clothing accessories, knitted or crocheted	7561.11	82.08	44.55	37.54
16	62	Article of apparel and clothing accessories, not knitted or crocheted	8126.01	140.89	87.19	53.70
17	63	Other made up textile articles; sets; worn clothing and worn textile articles; rags	5225.08	57.97	22.94	35.02
18	64	Footwear, gaiters and the like; parts of such articles.	2846.33	54.04	20.34	33.70
19	71	Natural or cultured pearls, precious or semiprecious stones, pre. Metals, clad with pre. Metal and articles thereof; imit. Jewellery; coin	40096.39	11.09	3.42	7.67
20	72	Iron and steel	9975.46	51.90	0.61	51.29
21	73	Articles of iron or steel	7082.90	105.19	60.06	45.13
22	74	Copper and articles thereof	1638.40	1.74	0.72	1.03

23	76	Aluminum and articles thereof	5126.68	60.62	95.53	-34.91
24	84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	20403.92	235.23	10.06	225.17
25	85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts.	11787.95	368.88	14.50	354.38
26	87	Vehicles other than railway or tramway rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical	18238.91	892.89	13.32	879.57
27	88	Aircraft, spacecraft and parts thereof.	2059.27	129.31	0.56	128.75
28	90	Optical, photographic cinematographic measuring, checking precision, medical or surgical inst and apparatus parts and accessories thereof.	3204.62	79.45	5.03	74.41

Source: Calculated from UN Comtrade Database and Trade Map Database (www.Comtrade.un.org. and www. Trademap.org) Data retrieved on Jan. 31, 2019.

Table 6, exhibits India's trade potential with Afghanistan in the year 2018. Analysis of India's trade potential with Afghanistan shows that India has huge potential with Afghanistan. The commodities wise potential are Cereals; Mineral fuels, mineral oils and products of their distillation; bituminous substances; Mineral waxes; Pharmaceutical product; Rubber and articles thereof; Article of apparel and clothing accessories, not knitted or crocheted, Other made up textile articles; sets; worn clothing and worn textile articles; rags; Footwear, gaiters and the like; parts of such articles.; Iron and steel; Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof; Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts; Vehicles other than railway or tramway rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical; Aircraft, spacecraft and parts thereof; Optical, photographic cinematographic measuring, checking precision, medical or surgical inst and apparatus parts and accessories thereof etc.

SUMMARY AND CONCLUSION

Trade is a way to improve the bilateral relationship and increase independence between two countries. India has the advantage of geographical location, common culture, languages, rituals; people to people contact its help to increase more trade with Afghanistan. India and Afghanistan share a common past which is an advantage for both economies to improve their cultural relations. It will improve people to people contacts which lead to business activities. This study has to attempt India's trade pattern and structure with Afghanistan in the pre and post-SAFTA period and commodities wise imports and exports of India's top twenty commodities. The findings of the study are India's trade with Afghanistan showing an increasing trend of trade during the study period. The study also predicts India's imports, exports and trade with Afghanistan will increase to US\$ 619.486 million, US\$ 973.162 million and US\$ 1592.655 million by 2028. It

shows an increasing trend of India's trade with Afghanistan in the upcoming eight years. It gives a policy implication that India needs to take the advantage of the geographical location to expand and diversify its exports base and efforts to capture the Afghan market and replace the countries with whom Afghanistan imports from like China, Iran, Afghanistan etc. They can increase trade by the development of infrastructure, maintain a harmonious relationship between both countries, provide financial help to each other like as subsidies or trade facilities and classification of commodities or industries, to improve cultural ties and people to people contacts.

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