Trade compatibility between Afghanistan and India: An empirical evaluation

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Trade Compatibility Between Afghanistan and India: An Empirical Evaluation

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Abstract

In order to expedite the flow of trade the number of regional trade agreements has grown among the countries since the globalization has started. The dramatic changes are quiet visible as these RTA are lucrative and attractive for the countries to manage their trade. Afghanistan started its regional trade with neighboring countries after joining SAARC in 2008. The study period is covering 8 years data from 2008-2015 by employing SITC Revision III classification. The prime focus of this article is to evaluate the trade compatibility between Afghanistan and India by employing Revealed Comparative Advantage (RCA) and Trade Intensity Index (TII). From the results it is quite clear that the trade between two countries is proceeding in India's favor. Afghanistan enjoys comparative advantage in just one product category and for the rest of the products the values of RCA are less than 1. India enjoys RCA in four product categories. The paper concludes with this recommendation that it will be better for both countries to keep promoting the export of the products which has the RCA > 1. India is leading the existing export market because of its strong export base. Both countries should strive to improve their export potential products, in order to gain the market and to be compatible and competitive partners with one another.

JEL Classification: F1, F12, O24

Keywords: Afghanistan, India, Trade Policy

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1. Introduction

To throw light on the possibilities and limits of meaningful coalitions among emerging countries, this study focuses on Afghanistan and India trade relations. The study evaluates the structure of comparative advantage for Afghanistan and India trade and the change in the economic scenario over a period of 8-year period from 2008 to 2015. The study attempted to evaluate Afghanistan–India trade using Revealed Comparative Advantage (RCA) and Trade Intensity Index (TII). Although Afghanistan has made momentous progress over the past decade despite continuing security challenges: GDP per capita increased more than threefold between 2003 and 2013, rising from $198 to $678 (World Bank Development Indicators, 2014).

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The main idea of internationalization of economies is based on the escalation of international trade. It is because of increasing trade and regional integration, there is a possibility in managing a successful transition in any economy especially in case of Afghanistan. In common parlance, the reimbursements from following regional integration are abundant and thus include economies of scale, increase local supply capacity and improve access to markets and regional infrastructure and much more.

Table 1: Afghanistan's Export Growth Rate

Year	2008	2009	2010	2011	2012	2013	2014	2015
Growth Percentage	0.0068	0.0065	0.0051	0.0042	0.0047	0.0055	0.0061	0.0073

Source: Calculation based on data from UN COMTRADE database SITC Revision III.

For a landlocked country such as Afghanistan, regional integration is exclusively imperious as it leads not only in trade promotional activities but encourages increased trade and connectivity within the regions followed by the global economy. The regional integration between Afghanistan and India is thus not a supernumerary for amalgamation with the rest of the world. Rather, it must be bolstered with wider economic assimilation that makes the most of the region's comparative advantages.

Table 2: India's export Growth Rate

Year	2008	2009	2010	2011	2012	2013	2014	2015
Growth Percentage	1.16	1.44	1.47	1.69	1.62	1.82	1.72	1.70

Source: Calculation based on data from UN COMTRADE database SITC Revision III

From Table 1 and 2, there is a lot of divergence in the export growth of both the countries. Looking at the digits of growth of exports in Afghanistan perspective, the values are minuscule and thus present that Afghan economy is still lingering in its export sector, whereas in case of India a growth of 1.16 per cent in 2008 is quiet good sign of economic health. The process of growth continued and has grown in the next years.

1.1: Objectives of the Study

- To evaluate the trade Compatibility between Afghanistan and India.
- To analyze the degree of intensity of trade between the two economies.

1.2: Data type and nature of sources

The type of research data is secondary, collected from UNCOMTRADE. The data is time series in nature as it is about the exports and imports for Afghanistan and India. The trading classification is SITC Revision 3 in 10 sectors encompassing 64 broad commodities.

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1.3: Research Methods employed

In this study Trade Intensity Index (TII) and Revealed Comparative Advantage (RCA) Index has been used to see trade compatibility between Afghanistan and India. The trade intensity index (TII) is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade and is defined as:

Trade intensity index (TII) = (XIA/ XIT) / (XWA/ XWT)

Where XIA and XWA are the values of country I's exports and world exports to country A's and XIT and XWT are Country I's total export and total world export respectively. An index values greater than 1 indicate an "intense" trade relationship (as used by Batra et al (2005) and Raghuramapatruni (2009).

Revealed Comparative Advantage Index shows how competitive is a product in countries export compared to the products share in world trade and was introduced by Balassa in 1965 (Balassa 1965, 1977). A product with high RCA is competitive and can be exported to countries with low RCA. The measures of Revealed Comparative Advantage (RCA) have been used to help assess a country's export potential. The RCA index of country I for product J is often measured by the product's share in the country's exports in relation to its share in world trade

Revealed Comparative Advantage (RCAij) = (XIJ/ XIT) / (XWJ/ XWT)

Where Xij and Xwj are the values of country I's exports of product J and world exports of product J and where XIT and XWT refer to the country's total exports and world total exports. A value of less than unity implies that the country has a revealed comparative. A value of less than unity implies that the country has a revealed comparative disadvantage in the product.

2. Findings and Data Analysis

The mean Revealed Comparative Advantage (RCA) of India and Afghanistan for the period 2008 to 2015 for 10 product categories according to SITC Rev III codes of products is presented in the following table 3 and 4.

Table 3: Mean RCA for Afghanistan and India from 2008-2015.

Division name	Commodity name	SITC code	RCA value
0 - Food and live animals			
	05 - Vegetables and fruit	5	0.485
	07 - Coffee, tea, cocoa, spices, and manufactures thereof	7	0.527
	08 - Feeding stuff for animals (not including unmilled cereals)	8	0.455

2 - Crude materials, inedible, except fuels			
	27 - Crude fertilizers, other than those of division 56, and crude minerals (excluding coal, petroleum and precious stones)	27	0.000
	29 - Crude animal and vegetable materials, n.e.s.	29	1.904
6 - Manufactured goods classified chiefly by material			
	65 - Textile yarn, fabrics, made-up articles, n.e.s., and related products	65	0.002
	66 - Non-metallic mineral manufactures, n.e.s.	66	0.000
	83 - Travel goods, handbags and similar containers	83	0.000
	89 - Miscellaneous manufactured articles, n.e.s.	89	0.000
9 - Commodities and transactions not classified elsewhere in the SITC			
	93 - Special transactions and commodities not classified according to kind	93	0.114

Source: Calculation based on data from UN COM TRADE database SITC Revision III.

From the above table 3, the mean RCA for Crude animal and vegetable materials, n.e.s. (29) is greater than one, thus implying that Afghanistan has a revealed comparative advantage in exporting this product to India. The products under (6-69) stands for Manufactured goods classified chiefly by material, which (65) is the code for Textile yarn, fabrics, made-up articles, n.e.s., And related products. And (66) for Non-metallic mineral manufactures, n.e.s. The mean RCA for these products is less than One, Afghanistan has better advantage for exporting these products. The products codes (83), for Travel goods, handbags and similar containers and (89), for Miscellaneous manufactured articles, n.e.s. Are the products which have a Mean RCA less than One, Afghanistan gains no advantage in exporting these products to India. The products under (9-99) codes stands for Commodities and transactions not classified elsewhere in the SITC, in which Afghanistan exports only the products under code of (93), Special transactions and commodities not classified according to kind. The Mean RCA for these products is less than one; it is no advantage in exporting these products to India.

Table 4: Mean RCA for India and Afghanistan from 2008-2015

Division name	Commodity name	SITC code	RCA value
0 - Food and live animals			
	00 - Live animals other than animals of division	0	0.0055

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	01 - Meat and meat preparations	1	0.1346
	02 - Dairy products and birds' eggs	2	0.5106
	03 - Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof	3	0.0538
	04 - Cereals and cereal preparations	4	0.0586
	05 - Vegetables and fruit	5	0.0175
	06 - Sugars, sugar preparations and honey	6	0.0816
	07 - Coffee, tea, cocoa, spices, and manufactures thereof	7	0.2935
	08 - Feeding stuff for animals (not including unmilled cereals)	8	0.0116
	09 - Miscellaneous edible products and preparations	9	0.0304
1 - Beverages and tobacco			
	11 – Beverages	11	0.0034
	12 - Tobacco and tobacco manufactures	12	0.8343
2 - Crude materials, inedible, except fuels			
	21 - Hides, skins and furskins, raw	21	0.0007
	22 - Oil-seeds and oleaginous fruits	22	0.0123
	23 - Crude rubber (including synthetic and reclaimed)	23	0.0154
	24 - Cork and wood	24	0.0001
	25 - Pulp and waste paper	26	0.0472
	27 - Crude fertilizers, other than those of division 56, and crude minerals (excluding coal, petroleum and precious stones)	27	0.0652
	29 - Crude animal and vegetable materials, n.e.s.	29	0.3253
3 - Mineral fuels, lubricants and related materials			
	33 - Petroleum, petroleum products and related materials	33	0.0051
4 - Animal and vegetable oils, fats and waxes			
	42 - Fixed vegetable fats and oils, crude, refined or fractionated	42	0.0012

	43 - Animal or vegetable fats and oils, processed; waxes of animal or vegetable origin; inedible mixtures or preparations of animal or vegetable fats or oils, n.e.s.	43	0.0000
5 - Chemicals and related products, n.e.s.			
	51 - Organic chemicals	51	0.4385
	52 - Inorganic chemicals	52	0.2456
	53 - Dyeing, tanning and coloring materials	53	0.0118
	54 - Medicinal and pharmaceutical products	54	1.2054
	55 - Essential oils and retinoid and perfume materials; toilet, polishing and cleansing preparations	55	0.2451
	57 - Plastics in primary forms	57	0.0567
	58 - Plastics in non-primary forms	58	0.0564
	59 - Chemical materials and products, n.e.s.	59	0.0823
6 - Manufactured goods classified chiefly by material			
	61 - Leather, leather manufactures, n.e.s., And dressed furskins	61	0.6659
	62 - Rubber manufactures, n.e.s.	62	0.5877
	63 - Cork and wood manufactures (excluding furniture)	63	0.0095
	64 - Paper, paperboard and articles of paper pulp, of paper or of paperboard	64	0.0370
	65 - Textile yarn, fabrics, made-up articles, n.e.s., And related products	65	2.4161
	66 - Non-metallic mineral manufactures, n.e.s.	66	0.0182
	67 - Iron and steel	67	0.0274
	68 - Non-ferrous metals	68	1.1816
	69 - Manufactures of metals, n.e.s.	69	0.3994
7 - Machinery and transport equipment			
	71 - Power-generating machinery and equipment	71	0.0331
	72 - Machinery specialized for particular industries	72	0.1610

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	73 - Metalworking machinery	73	0.1028
	74 - General industrial machinery and equipment, n.e.s., And machine parts, n.e.s.	74	0.0767
	75 - Office machines and automatic data-processing machines	75	0.0071
	76 - Telecommunications and sound-recording and reproducing apparatus and equipment	76	0.0091
	77 - Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof (including non-electrical counterparts, n.e.s., of electrical household-type equipment)	77	0.2944
	78 - Road vehicles (including air-cushion vehicles)	78	0.0276
	79 - Other transport equipment	79	0.0296
8 - Miscellaneous manufactured articles			
1 - Beverages and tobacco	81 - Tools, implements, cutlery, etc of base metal	81	0.0228
	82 -Miscellaneous articles of base metal	82	0.1396
	83 - Nuclear reactors, boilers, machinery, etc	83	0.2785
	84 - Electrical, electronic equipment	84	2.5535
	85 - Vehicles other than railway, tramway	85	0.2735
	87 - Aircraft, spacecraft, and parts thereof	87	0.0436
	88 - Ships, boats and other floating structures	88	0.0338
	89 - Arms and ammunition, parts and accessories thereof	89	0.3544
	93 - Miscellaneous manufactured articles	93	0.0311

Source: Calculation based on data from Uncomtrade database SITC Revision III.

The commodities with product category SITC codes 54, 65 and 68 are beneficial ones, as for these India is getting benefit in exporting these products to Afghanistan as the values are greater than 1 and rest commodities do have the value below 1, thus no trade latency. Now looking at the paradigm of trade intensity, the two nations are getting too close in trade relations with every passing year. The figures in the table 5 are ample proof that the trade relations between the nations is increasing. Although

from the Indian perspective, the pace of linkage is fast, but Afghanistan is also not leaving any stone unturned to show its presence in the Indian trade structure.

Table 5: Trade Intensity Index between Afghanistan and India

Year	Trade Intensity Index between Afghanistan and India	Trade Intensity Index between . India and Afghanistan
2008	5.57	8.37
2009	4.34	5.65
2010	2.34	4.54
2011	2.14	4.97
2012	2.67	4.11
2013	2.79	5.62
2014	3.02	7.79
2015	6.74	9.56

Source: Calculation based on data from UN COMTRADE database SITC Revision III.

3. Conclusion and Recommendations

The study aimed at assessing the structure of comparative advantage in Afghanistan and India and the change in the scene over a period from 2008 to 2015. Afghanistan and India has a good trade relationship since past centuries, this relation has become stronger when Afghanistan join SAARC in 2008. It is obvious that Afghanistan accelerates its exports and trade relations and meets better opportunities after joining SAARC.

Afghanistan exports in total 9 products to India, from which Afghanistan has comparative advantage only in one commodity with product code (29) namely tanning, dyeing extracts, tannins, derives, pigments. Moreover, India exports 57 products to Afghanistan from which India has good competitive advantage in three product categories namely Medicinal and pharmaceutical products (68), Non-ferrous metals and two other products with high level of competitive advantage are products with codes of (65), Textile yarn, fabrics, made-up articles, n.e.s., And related products and Nuclear reactors, boilers, machinery (84). it is quite clear that India gain more advantage in exporting these products to Afghanistan. The paper has also evaluated the trade intensity index for both countries to examine their intensity in trade. Both the economies are having intense level of trade latency with each other. The trade intensity of India is better than Afghanistan, as India rules the export market. The export health of the Afghanistan is not that good, even it is worse. Afghanistan exports only 9 products to India. It gives a policy implication that Afghanistan needs to take the advantage of the geographical location to expand and diversify its export base and India should effort to capture Afghan market and replace the countries with whom Afghanistan import from like Pakistan, China, Iran etc.

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